Final Report of Best Practices to Address Under-Representation of African-Americans and Hispanics in the Health Professions in Texas

Submitted to
Texas Higher Education Coordinating Board
Minority Health Research and Education Grant Program

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EXECUTIVE SUMMARY
BEST PRACTICES TO ADDRESS UNDER-REPRESENTATION OF AFRICAN-AMERICAN AND HISPANICS IN THE HEALTH PROFESSIONS IN TEXAS
SUBMITTED TO
TEXAS HIGHER EDUCATION COORDINATING BOARD

The Problem:

Texas is facing a shortage of health professionals. An increasingly important by-product is a workforce that is no longer ethnically or culturally representative of a Texas population. This project was a compilation and analysis of existing programs designed to fill the holes in the health care workforce by encouraging diversity in health professions.

Findings:

Through an analysis of existing programs, we have identified ***gaps in pipeline levels by discipline and education levels***. Nationwide and statewide[1] there is a lack of programs to support recruiting and retaining minorities into *allied health, pharmacy and public health careers*.[2] Nation and statewide there is a clear lack of programs for recruiting and retaining minorities in academic programs that are ***less than two years of post high school education***.

Figure 1. Number of Programs by Discipline, Nationwide and Texas

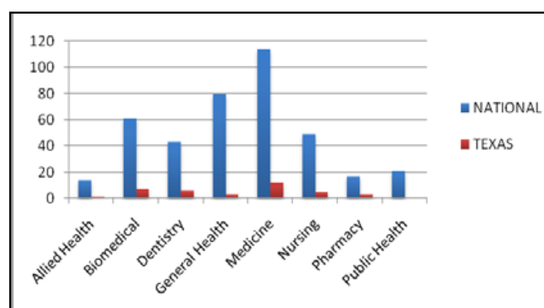
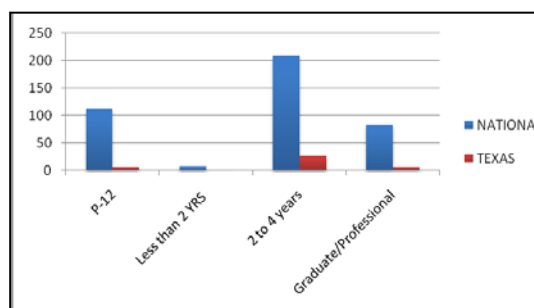


Figure 2. Number of Programs by Pipeline Level, Nationwide and Texas



Obstacles to creating best practices *to fill those gaps include:*

1. A lack **of *vertical alignment" and "partnership"*** between all education pipeline levels (i.e. P through 12, less than two years, two to four years and graduate/professional) for recruiting and retaining minorities into the health professions.

2. A lack of ***communication*** between the educational pipelines. Each level of the educational pipeline has their own goals for the students. Thus, there is no "shared" or "common" goal.

3. Very little information about the ***cost-effectiveness*** of programs for recruiting and retaining minority students into careers in the health professions. Cost-effectiveness data is not readily available or openly discussed in much of the literature nor is it widely publicized in public programmatic information such as websites and program brochures.

Products:

Website: An on-line searchable database of programs located during this project can be found at: ***http://www.healthcareersbestpractices.org/***.

The "Best Practices" database allows users to search of examples of programs/interventions for recruiting and retaining minority students into careers in the health professions. Additional features include the ability to export examples in EXCEL and PDF formats and submit programs to be added to the database. Search criteria options include the ability to select examples by:

- State
- Pipeline Level
- Keyword
- Discipline
- Type (Published or Experiential)
- Best Practice designation (Best Practice, promising, other examples)

[1] Note: Statewide there were zero programs identified for recruiting and retaining minority students into careers in Public Health.
2 Note: There are limitations to this project. These are not all the programs in existence. These 411 programs were identified during a 3 month /400 hour search.

Measureable Outcomes: In addition to the database, through the process of developing a standardized operational definition of "Best Practices" we were able to identify ***measureable outcomes*** to quantify what makes a program a "best practice". These ***"best practice" characteristics***, listed below, ***can be used to benchmark*** any existing program's design and performance, as well as be used in the development of future programs.

- ► ***Appropriateness***
- ► ***Ability to be shared***
- ► ***Ability to be improved***
- ► ***Effectiveness***

Using the measurable outcomes as benchmarks, we conducted an analysis of randomly selected programs in our "Best Practices" database for recruiting and retaining minority students into careers in the health professions. Listed below we found certain programs with elevated levels of these positive characteristics.

National Programs:

1. Duke University: Biomedical Engineering Program
2. University of Toledo College of Medicine: Student National Medical Association (SNMA)
3. Bakersfield College: Central Valley Nursing Program
4. National Program: Minority Access to Research Careers (MARC)

Statewide Programs:

1. The University of Incarnate Word: The Keller Method
2. Baylor College of Dentistry: Post Baccalaureate Program
3. The University of Texas, San Antonio: Minority Biomedical Research Support (MBRS) Programs

Conclusions:

Based on our findings we have determined a list of ranked and recommended *program characteristics* of "Best Practices" that should be considered for statewide, regional and local implementation.

1. ***Cost effectiveness***: A "Best Practice" program is able to measure and evaluate the cost of a program in relation to the outcome/benefit. Since the goal of this project was to define and analyze "Best Practices" and cost effectiveness is only one element of what makes a program a "Best Practice" much more research is needed in the area of measuring cost effectiveness.
2. ***Appropriate***: A "Best Practice" program contains age, ethnic and culturally appropriate interventions for the population it seeks to influence and is taught on the education level of the intended population. The main focus of the programming/intervention should be to recruit and retain African Americans and Hispanic students in the healthcare workforce pipeline.
3. ***Ability to be shared***: A "Best Practice" is a program that can be shared and contains a curriculum that is transferable and generalizable to any population. It can be easily sustained, replicated and applied to meet the needs of a diverse population with different ethnic and cultural beliefs.
4. ***Ability to be improved***: As the environment changes, a "Best Practice" program can be improved, adapted, enhanced or modified in order to successfully meet the new needs of the population it is serving.
5. ***Effective:*** A "Best Practice" program provides results that demonstrate it has effectively accomplished its intended goals for vested stakeholders including students, educators, funders and communities. Results can include qualitative or quantitative data as well as personal narratives.

Recommendations:

After substantial research and evaluation, Texas AHEC East feels that it is most accurate to recommend "Best Practice" ***characteristics*** for implementation ***not individual "Best Practice" programs***. In our research we have found that it is the common and shared characteristics that make a program successful. Thus, based on our findings in order to maximize the state's investment in future MHGP grant competitions we recommend giving preference to programs with the following characteristics:

- Programs that have been scored against the standardized operational definition of "Best Practices" and score as either a "Best Practice" or "Promising Practice".
- Programs that recruit, retain, or support minority students into programs that are less than two years of post high school education (certificate programs).
- Programs that recruit, retain, or support minority students into allied health, pharmacy, and public health careers.
- Programs that show collaboration, partnerships, and vertical alignment.
- Programs that can measure the effectiveness of the program in relation to the cost.
- Programs that have a methodology to measure outcomes

Table of Contents

Executive Summary………………………………………………..………………. iii

Background…………………………………………………………………………. 3

Milestones for Completion of Grant………………………………………………….. 6

Task 1. Define "Best Practices"…………………………………..………..…….7

Task 2. Compile Assumed "Best Practices" Examples…………….……………….. 9

Task 3. Analyze "Best Practices" Examples……………………….………………11

Task 4. Develop "Best Practices" Recommendations…………………………... 16

Best Practices Part 2…………………………………………………………...18

Appendices

A. Annotated Bibliography ……………......................................……. 20

B. Survey Instrument …………………………………………………….…46

C. Key Words……………………………………………………………….52

D. Survey Instrument to Collect Experiential Examples "Best Practices"…….54

E. Accumulated Practice Examples……………………………………………58

F. Database Codification System……………………………………….….. 61

G. Best Practice Scoring Packet Example……………………………….…. 64

H. Scores and Rankings of Randomly Selected Programs………………..…... 66

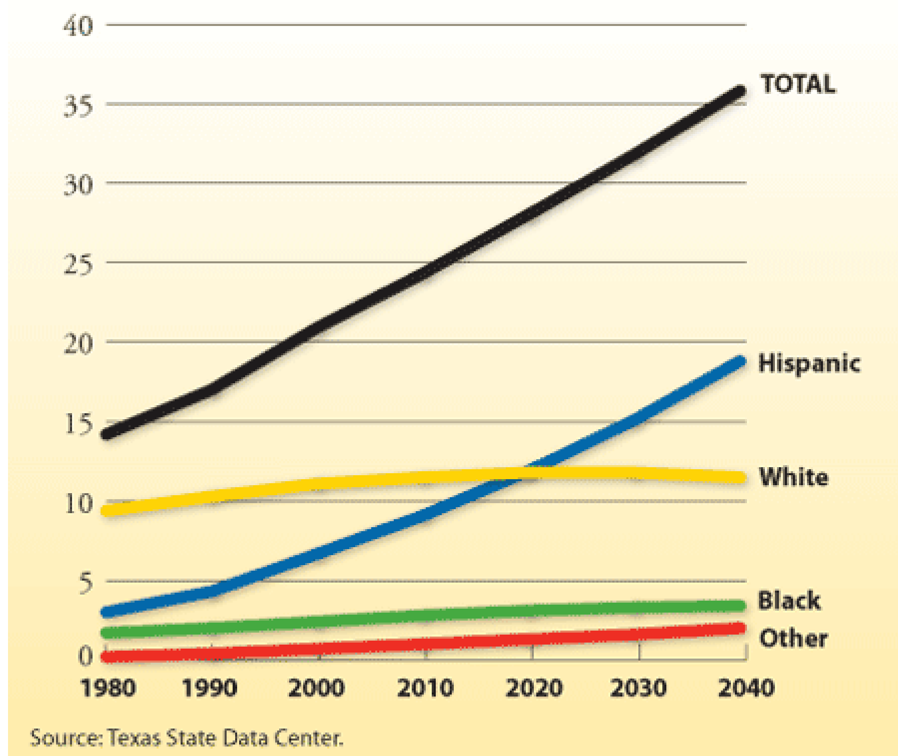
- "All Programs"

- "Texas Only"

Background

Background
Without a doubt, Texas is facing a shortage of health professionals. According to Health Resources and Services Administration (HRSA), 230 of the 254 counties in Texas are designated Medically Underserved Areas (MUA) and there are 975 Health Professional Shortage Areas (HPSA) (Health Resources and Services Administration, 2010). While knowing the root causes of the shortage is critical, an increasingly important by-product of a lack of health professionals is a workforce that is no longer ethnically or culturally representative of a Texas population that is 48.9% minority (Texas Data Center and Office of the State Demographer, 2010). Figure three depicts the projected rise in the African American population and dramatic increase in the Hispanic population in Texas (Texas Data Center and Office of the State Demographer, 2010).

Figure 3: Population Projection, in millions



The Office of the State Demographer predictions a future Texas population that is 8-11% African American and 45-60% Hispanic, making the need for the diversification of the health care workforce even more immediate. ***However, as illustrated by Figure three, the sharp and rapid rise in the Hispanic population creates an urgency for us to focus our research efforts on the needs of this ethnic group.***

Compounding the shortage of ethnically and culturally representative health professionals is the disappointing rate at which African Americans and Hispanics are entering health professions schools. Health Resources and Services Administrations Bureau of Health Profession (BHPr) has collected data, as illustrated in Tables one and two, on national enrollment of African

Americans and Hispanics in some of the health profession schools. ***BHPr's data provides us with an illustrative, but incomplete, background on the issue of African American and Hispanic enrollment in health profession schools.***

Table 1. Non-Hispanic Black Enrollment in Health Professions

	1981-82	1991-92	2000-01
Allopathic Medicine	3884	4334	4900
Osteopathic Medicine	104	236	400
Podiatry	125	233	177
Dentistry	999	907	832
Optometry	57	141	126
Pharmacy	932	1531	3132
Bureau of Health Professions. (2002). *National Center for Health Workforce Analysis: U.S. Health Workforce Personnel Factbook.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/reports/factbook.htm on September 29, 2010.			

Table 2. Hispanic Enrollment in Health Profession Schools

	1981-82	1991-92	2000-01
Allopathic Medicine	3093	3645	4220
Osteopathic Medicine	62	276	381
Podiatry	40	161	103
Dentistry	847	1187	925
Optometry	286	295	268
Pharmacy	787	867	1255
Bureau of Health Professions. (2002). *National Center for Health Workforce Analysis: U.S. Health Workforce Personnel Factbook.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/reports/factbook.htm on September 29, 2010.			

With a minority population on the rise and entry into health programs irregular, this project addressed how to help meet the health care needs of the diverse population by growing an ethnically diverse health care workforce pipeline. The focus of our research was to address enrollment in health degree programs offered at the associate, baccalaureate, master's, Ph.D., and professional doctorate level in all of the following disciplines: allied health, biomedical sciences, dentistry, medicine, nursing, pharmacy and public health.

A variety of programs have been devised at the local, state, and national level which purport to focus attention on the interests, activities and supports that are believed to be significant positive influencers for the entry and retention of African Americans and Hispanics into health careers. Millions of dollars have been spent in sustaining those programs. Anecdotal evidence and the stories of individuals who champion such programs and projects are often cited as evidence. Some programs do indeed have better track records indicating success in matriculation and completion of education and training, enabling underrepresented persons to enter the healthcare field in either a technical occupation or professional field. Some efforts have been made to catalog successful programs, however, efforts to define, document, catalog, and report projects and programs that might be considered "Best Practices" has been lacking in Texas.
Thus, the principle objective of this project was to identify "Best Practices" for recruiting and retaining African-American and Hispanic students in the health care workforce pipeline. The scope of this research included investigation of the programs intended to address

underrepresentation at three levels of education, 1) from pre-kindergarten through Grade 12, 2) undergraduate education at both two-year and four-year institutions, 3) and graduate education including professional degrees.

The overall goal of this project was to identify "Best Practices" for recruiting and retaining African-American and Hispanic students into the health care workforce pipeline. In order to accomplish the goal, four key objectives were devised and used to create a work plan. Objectives included 1) *developing a standardized operational definition* of "Best Practices" for recruiting and retaining African-American and Hispanic students in health degree programs at various levels in the education pipeline 2) *compiling examples* of published and experiential "Best Practices" programs, 3) *conducting an analysis* of published and experiential "Best Practices" examples to identify those examples that are consistent with the standardized operational definition of "Best Practices", explore gaps, obstacles to filling gaps, implementation scalability, resource intensity, limitations, and 4) *developing a report* which describes the project and a set of "Best Practices" process and outcome recommendations.

Milestones for Completion of Grant

Four general objectives were developed and the following work plan completed:

1) *Developed a standardized operational definition of "Best Practices"* for recruiting and retaining African-American and Hispanic students in health degree programs, as it relates to each health profession's education pipeline level (i.e. P-12, less than two years, two to four years, and graduate/professional education).

2) *Compiled examples of published and experiential "Best Practices" programs/interventions* on African-American and Hispanic student recruitment and retention in all levels in the health profession education pipeline including examples from national, state, regional and local level organizations for health degree programs including: allied health, biomedical sciences, dentistry, medicine, nursing, pharmacy and public health.

3) *Conducted an analysis of published and experiential "Best Practices" examples to identify those examples consistent with standardized operational definition* of "Best Practices", explored gaps, obstacles to filling gaps, implementation scalability, resource intensity, limitations, and evidence of other elements of interest to health profession student recruitment and retention for baccalaureate, master's, Ph.D., and professional doctorate level health degree programs.

4) *Developed a project report which describes the objectives, methodology and results of the project.* The project report included a description the of "Best Practices" process, outcome, and recommendations that would maximize future state investments in programs that seeks to recruit and retain minorities into careers in the health professions.

Task 1: Define "Best Practices"

In order to identify interventions characterized as "Best Practices" as it relates to recruiting and retaining minority students into careers in the health professions, it was necessary to begin by defining the term "Best Practices". We conducted searches using published journal articles as well as through queries of stakeholders for feedback on the term.

To locate published journal articles for use in the "Best Practices" definition we used three search engines, PubMed, Google Scholar and OVID to conduct an electronic literature search for any articles, regardless of the field, that contained the term "Best Practices". This generated over 70 journal articles which were used to create a master list of commonly occurring words and phrases associated with the term "Best Practices". An annotated bibliography was compiled, highlighting characteristics most commonly found among best practices.[3]

After completing our literature review, we identified stakeholders in the field that could help us define the term "Best Practices" as it relates to recruiting and retaining minority students into careers in the health professions. Our stakeholders included published authors from the articles located, leaders located on organizational websites and referrals from colleagues. Our stakeholder group consisted of individuals that represented every level in the health professional education pipeline from a variety of health career disciplines. From these groups of stakeholders, approximately 700 representatives were identified. Using the terms and phrases identified during our literature review, we developed a short online survey.[4] Together with an explanatory email, a link to the survey was sent to the 700 stakeholders. We received 71 responses to our survey, a 10% response rate.

To determine the final definition for use in this project, we compiled the responses from the survey, to be reviewed by the expert panel. The 12 member panel was comprised of individuals from diverse backgrounds, representing all four health professional education pipelines (i.e. P-12, less than two years, two to four years, and graduate/professional education). Panel members were asked to convene and develop a standardized operational definition related to the label "Best Practices" for recruiting and retaining minority students into careers in the health professions using the results from the survey. Subsequent to a teleconference using Adobe Connect, the expert panel defined "Best Practices" for recruiting and retaining minority students into careers in the health professions as:

[3] Please refer to **Appendix A**

[4] For a copy of the survey instrument please refer to **Appendix B**.

Figure 4. Standardized Operational Definition of "Best Practices"

Task 2: Compile Assumed "Best Practices" Examples

After the expert panel defined "Best Practices" for recruiting and retaining minority students into careers in the health professions, we focused on compiling examples of interventions that most accurately fit the definition. Examples were compiled by conducting a rigorous literature and reference search (i.e. published and electronic) using keywords[5] based on student demographics (i.e. African American, Hispanic, Minority, etc.), health discipline (i.e. Allied Health, Biomedical Sciences, Dentistry, Medicine, Nursing, Pharmacy, Public Health, and General Health Professions), and education level (i.e. P-12, less than two years, two to four years, and graduate/professional education).We identified current and previously operational interventions. We included both interventions published in the literature and experiential programs documented in websites or through other non-published literature sources that attempted to improve and/or increase recruitment and retention (i.e. pamphlets, brochures, non-published organizational reports etc.).

Programs that were identified through the literature to recruit and retain minorities, specifically African American and Hispanics, into the health care workforce were classified as ***published*.** These programs have been published in academic and/or peer-viewed periodicals, governmental and non-profit reports, cited at nationally recognized conferences for poster and/or presentation or noted in local and/or national newspapers. Programs that were identified through 1) a web-based search using keywords that would most likely identify programs that recruit and retain minorities, specifically African-American and Hispanic students, into the healthcare work force, 2) survey results from program administrators associated with organizations that serve minority students and, 3) programs submitted based on requests for additional information were classified as ***experiential*.** In addition, to collect further experiential examples we surveyed individuals from the expert panel, the national AHEC Organization (NAO), HCOP grantees, Centers of Excellence, individuals located during our search for published and experiential examples, and individuals who responded to the initial survey for the definition of "Best Practices".[6]

To supplement the literature search and survey, we utilized librarians as a secondary resource. We worked with the University of Texas Medical Branch and (UTMB) Texas A&M University at Galveston (TAMUG) libraries. Librarians from each of these universities assisted with specialized searches to locate disciplines for which we had difficulty finding adequate interventions. Working with professional librarians afforded us use of academic search engines that we would ordinarily not have had access to. In all, we used ten search engines to compile a list of interventions whose mission focuses on the recruitment and retention of African-American and Hispanic students into careers in the health professions. Through our efforts, over 400+ published and experiential interventions and/or programs were identified.[7]

[5] For copy of key words See **Appendix C**

[6] For a copy of the survey instrument See **Appendix D**

[7]For copy of accumulated practice examples See **Appendix E**

After compiling the assumed intervention examples, we designed a system for categorizing and inventorying the programs.[8] This resulted in the development of a searchable online database of the academic and experiential examples. The "Best Practices for Recruiting and Retaining Online Searchable Database" can be found at ***http://www.healthcareersbestpractices.org/***.

The "Best Practices" database includes the ability to search examples of interventions and/or programs for recruiting and retaining minority students into careers in the health professions as well as the ability to generate reports, which can be exported to EXCEL or PDF. Criteria options include the ability to select examples by:

- State
- Pipeline Level
- Keyword
- Discipline
- Type (Published or Experiential)
- Best Practice designation (Best Practice, promising, other examples)

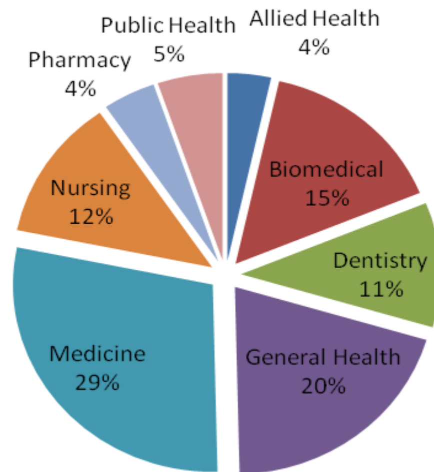
The best practices recruiting and retaining online searchable database can be used by students who are searching for current health careers programs in their state, researchers who want to study program effectiveness, and program administrators seeking successful programs and/or techniques that they can replicate in their own communities. The database and website will be maintained after the completion of the grant as funding permits.

[8] For copy of database codification system See **Appendix F**

Task 3: Analyze "Best Practices" Examples

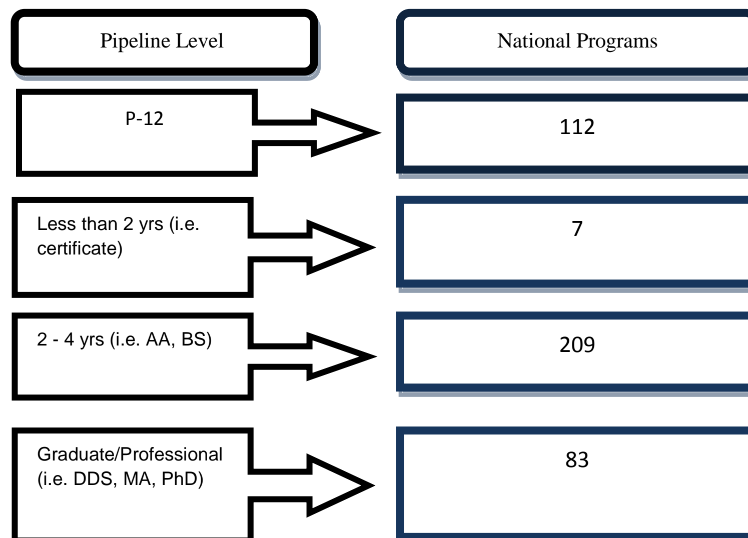
After compiling examples of practices to recruit and retain minority students into careers in the health professions, we examined our database for gaps in recruiting and retention practices. We found there to be a clear lack of programs to support recruiting and retaining minorities into *allied health, pharmacy and public health careers*.

Figure 5. Total Number of Programs by Discipline



Further, there is a clear lack of programs to support recruiting and retaining minorities at *the pre-professional undergraduate level* (i.e. certificate program in areas such as surgical technology, nursing assistant, dental hygienist etc.).

Figure 6. Number of Programs by Pipeline level



From the examples of programs designed to recruit and retain minority students into careers in the health professions collected, we selected a random sample to compare against the expert panel's standardized operational definition of a "Best Practice". Our goal was to determine

which of the examples in our database could be designated a “Best Practice”. In order to generate the list of random sample programs, we created an EXCEL spreadsheet with all programs and then used a random sample formula to select programs for analysis. For validity, we analyzed 10% of “all programs”.

The sampling of “all programs” resulted in 33 published and experiential examples of programs for recruiting and retaining students into careers in the health professions: 21 experiential and 12 published practices. In order to control for geographic bias, we conducted a separate analysis of programs only from the state of Texas. In our database there are a total of 32 Texas programs. Similar to the methodology for reviewing “all programs”, six “Texas only” programs were randomly selected and scored. The charts below are breakdowns of the health disciplines represented in the “all program” sample and the “Texas only” sample:

Figure 7. Number of Programs scored in the random sample

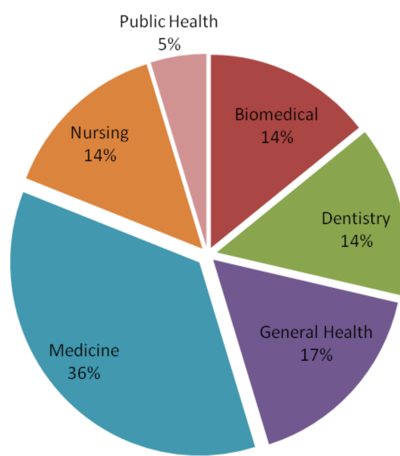
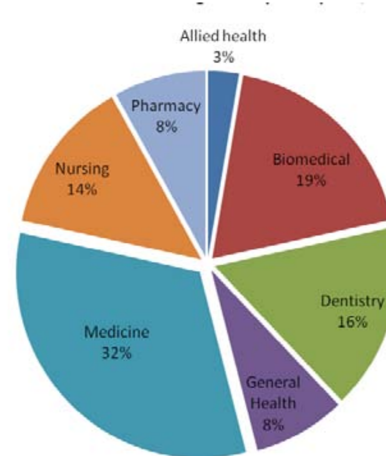


Figure 8. Number of Programs scored “Texas Only”



Both random samples (“all programs” and “Texas only”) programs were divided among panel members for review and scoring.[9] Each panel member was responsible for reviewing a minimum of six programs, thus each program was reviewed by three panel members. Panel members were individually trained on the scoring methodology. The training included an explanation of the scoring tool, as well as instructions on how to enter scoring into the online database (http://www.zoomerang.com/Survey/WEB22CHWWYTRR6).

The raw data was sorted by program identifier and the scores were averaged. Programs that had an average score between 100 points to 79 points were classified as a “Best Practice” and programs that had an average score 78 points to 60 points were classified as a “Promising Practice”.

[9] For a copy of the reviewer instructions and packet for scoring See **Appendix G**

Through scoring, the following programs were found to be aligned with the standardized operational definition of "Best Practices":[10]

1. Duke University: Biomedical Engineering (BME) Program (Published; Mean Score 86)
2. University of Toledo College of Medicine: Student National Medical Association (SNMA) (Published; Mean Score 83)
3. Bakersfield College: Central Valley Nursing Program (Published; Mean Score 81)
4. University of California, Irvine: Minority Access to Research Careers (MARC) (Experiential; Mean Score 80)

Texas ONLY programs:[10]

1. The University of Incarnate Word: The Keller Method (Published; Mean Score 86)
2. Baylor College of Dentistry: Post Baccalaureate Program (Published; Mean Score 85.5)
3. The University of Texas, San Antonio: Minority Biomedical Research Support (MBRS) Programs (Experiential; Mean Score 84)

All programs that were identified as "Best Practices" share certain characteristics. We found that programs that scored as "Best Practices":

- *Are appropriate*
  A best practice program contains age, ethnic and culturally appropriate interventions for the population it seeks to influence and is taught on the education level of the intended population. The main focus of the programming/intervention should be to recruit and retain African Americans and Hispanic students in the healthcare workforce pipeline.
- *Can be shared*
  A best practice program that can be shared contains a curriculum that is transferable and generalizable to any population. It can be easily sustained, replicated and applied to meet the needs of a diverse population with different ethnic and cultural beliefs.
- *Can be improved*
  As the environment changes, the practice can be improved, adapted, enhanced or modified in order to successfully meet the new needs of the population it is serving.
- *Are effective*
  An effective program provides results that demonstrate it has effectively accomplished its intended goals for vested stakeholders including students, educators, funders and communities. Results can include qualitative or quantitative data as well as include personal narratives.

Although these programs share characteristics that make them "Best Practices" there are some *limitations to these programs* that need to be noted should the THECB be considering replication and implementation of these programs to help fill the gap in the health care careers pipeline. In particular, these programs are specifically targeted by discipline and education pipeline level (as shown in Table 3). Therefore of these "Best Practices" identified, only the University of Incarnate Word program fills an indentified gap in recruiting and retention practices by discipline and no "Best Practice" programs were identified that could assist in filling the gaps in the pipeline by pipeline level.

[10] For rankings score in the sample See **Appendix H**

Table 3: Limitations of Best Practice Programs

Best Practice Program Title	Ethnic Focus of Program	Discipline Focus of Program	Education Pipeline Level Focus of Program	Scalability[11]	Resource Intensity[12] (including cost)	Citation
Duke University: Biomedical Engineering Program	African American, Hispanic	Biomedical	Graduate/ Professional	15 out of 16	6 out of 6	Reicher, William. (2006, Summer). A Success Story: Recruiting & Retaining Underrepresented Minority Doctoral Students in Biomedical Engineering. Liberal Education. 52-55.
The University of Incarnate Word: The Keller Method	Minority students	Pharmacy	Graduate/ Professional	14 out of 16	3.5 out of 6	Fike, D.,McCall., Estes., F., Ndefo, U; Raehl, C., & Lockman, P. (2011). Promoting minority student learning gain in a Prescription Practice Course. Currents in Pharmacy Teaching and Learning, 17–22
Baylor College of Dentistry: Post Baccalaureate Program	Students from culturally diverse and disadvantaged backgrounds	Dentistry	Graduate/ Professional	14.5 out of 16	4.5 out of 6	Alexander CJ & Mitchell DA. (2010). The role of enrichment programs in strengthening the academic pipeline to dental education. J Dent Educ, 74(10 Suppl), S110-120.
The University of Texas at San Antonio: Minority Biomedical Research Support (MBRS)	Minority Students	Biomedical	Graduate/ Professional	12 out of 16	4 out of 6	http://www.utsa.edu/mbrs/
University of Toledo College of Medicine: Student National Medical Association (SNMA)	Underrepresented minority students	Medicine	2 to 4 years	14 out of 16	4 out of 6	Rumala BB, Cason FD Jr. (2007). Recruitment of underrepresented minority students to medical school: minority medical student organizations, an untapped resource. J Natl Med Assoc, 99(9),1000-4, 1008-9.
Bakersfield College: Central Valley Nursing Program	Underrepresented minority students	Nursing	2 to 4 years	15 out of 16	6 out of 6	Buchbinder, H. (2007). Increasing Latino Participation in the Nursing Profession: Best Practices at California Nursing, 1-68 Programs. Tomás Rivera Policy Institute, 1-68
University of California, Irvine: Minority Access to Research Careers (MARC)	Underrepresented minority undergraduate junior and seniors majoring in sciences	Biomedical	Graduate/ Professional	9 out of 16	3 out of 6	http://port.bio.uci.edu/MARC/default.htm

[11] The programs were ranked on a Likert scale from 1 to 16. 1 equated to requiring a lot of resources to replicate and 16 equated to required little resources to replicate. For more information see http://www.zoomerang.com/Survey/WEB22CHWWYTRR6 question 9

[12] The programs were ranked on a Likert scale from 1 to 6. 1 being not at all cost effective to 6 very cost effective. For more information see http://www.zoomerang.com/Survey/WEB22CHWWYTRR6 question 18.

In addition to the limitations of the programs themselves, there are current environmental issues that contribute to the difficultly in creating best practices to fill the gaps in the pipeline. With assistance from our expert panel, we determined the *obstacles* to creating best practices *to filling the gaps* in pipeline to be:

1. There is a lack of *"vertical alignment" and "partnership" between institutions* at the pipeline levels for recruiting and retaining minorities into health professions.
2. There is a lack of *communication* between the educational institutions at the pipeline levels. There is no "shared" or "common" goal.
3. There is very little information on *the role of cost effectiveness* in creating, implementing, and sustaining programs.

While these obstacles were identified during this research project, they were *not* explored in depth. In order to fully understand the implications of these obstacles and the ways to overcome these barriers, further research will be required.

In addition to *identifying and analyzing* "Best Practices", we *identified* programs that are "Promising Practices". These "Promising Practice" programs scored well but not high enough to be considered a "Best Practice". Promising practices identified during our analysis include:

1. Upstate Area Health Education Center: Health Careers Summer Institute (Experiential, Mean Score 75)
2. National Program: Community-Based Dental Education (Published, Mean Score 77)
3. University of Texas at Austin and University of Texas MD Anderson Cancer Center: Toxicology Training Program (Experiential, Mean Score 75)
4. Joint Admission Medical Program (JAMP) (Experiential, Mean Score 74)
5. Indiana University: Simon Cancer Center Summer Research Program (SRP), Indiana University (Experiential Mean Score, 65)
6. Thomas Jefferson University: Graduate Education Accelerated Routes for Underserved Persons (GEAR-UP) (Published, Mean Score 64)

"Promising Practices" may have the potential to become "Best Practices" but in their current state lack strength in one or more of the four areas identified as core characteristics of "Best Practice" programs: 1) appropriateness, 2) ability to be shared, 3) ability to be improved and 3) effectiveness. Through our research we have identified several obstacles to transitioning "Promising Practices" to "Best Practices" to fill the identified gaps in the health care workforce pipeline. Interestingly, the most significant obstacle identified is the effect of the current financial environment on modifying programs. Texas, like many other states, is experiencing an environment with much competition for limited financial resources. In addition, there is very little information available on the role of cost effectiveness in creating, implementing, and sustaining programs identified as Best or Promising Practices. However, since this project was not about the process of transitioning "Promising Practices" into "Best Practices", Texas AHEC East recommends further research addressing the role of cost effectiveness as it relates to transitioning a "Promising Practice" to a "Best Practice".

Task 4: Develop "Best Practices" Recommendations

Limitations of Research

For important reasons, there is significant need to understand the qualities of a program that enable it to be identified as a "Best Practice" for recruiting and retaining minority students into careers in the health professions. Texas AHEC East has undertaken this objective. However, through our last year of research on a journey to meet this objective, we have identified several issues that are in need of further exploration to fully understand the complex concept of "Best Practices". The issues of *transitioning a "Promising Practice" to a "Best Practice"* (as noted in Task 3), *cost-effectiveness* and insufficient educational institution driven *P-Doctoral alignment* require further consideration.

Very little information exists about the cost-effectiveness of programs for recruiting and retaining minority students into careers in the health professions. Cost-effectiveness data is not readily available or openly discussed in much of the literature nor is it widely publicized in public programmatic information such as websites and program brochures. To that end, much more research is needed in the area of cost-effectiveness. Texas AHEC East would suggest that the THECB consider funding a research grant on the issues surrounding cost-effectiveness including the development of standardized definition of cost-effectiveness as it pertains to recruiting and retaining African-American and Hispanic students into careers in the health professions as well as the development of a methodology for measuring cost-effectiveness in relationship to outcomes.

In addition to the need for more information on cost-effectiveness, this current research was limited in its abilities to explain in entirety the role of educational institution driven P-Doctoral alignment as an obstacle to creating "Best Practices". The issue of educational institution driven P-Doctoral alignment was not found in our literature search but was brought to our attention as an experiential occurrence encountered by our expert panel. Thus due to the nature of discovery, Texas AHEC East was limited in our ability to research and explore the ramifications of insufficient educational driven institution P-Doctoral alignment within the terms of this grant. Texas AHEC East would suggest that the THECB consider funding further research in the area of educational institution driven P-Doctoral alignment as it pertains to recruiting and retaining African-American and Hispanic students into careers in the health professions. The further research should expand the understanding of P-Doctoral alignment definitions, barriers, successes, relationships to programmatic design, institutional challenges, and multi-level policy implications.

Due to the limitations in our understanding of these issues, Texas AHEC East cannot recommend that cost-effectiveness and P-Doctoral alignment become ***required*** design elements of future grants. We recognize the apparent importance of these issues to recruiting and retaining minority students into careers in the health professions, and believe that these elements need to be given consideration when future MHGP grants are awarded.

Recommendations
Despite limitations, we have identified a list of ranked and recommended *program characteristics* of "Best Practices" that should be considered for statewide, regional and local implementation:

1. *Cost effectiveness*: A "Best Practice" program is able to measure and evaluate the cost of a program in relation to the outcome/benefit. Since the goal of this project was to define and analyze "Best Practices" and cost effectiveness is only one element of what makes a program a "Best Practice" much more research is needed in the area of measuring cost effectiveness.
2. *Appropriate*: A "Best Practice" program contains age, ethnic and culturally appropriate interventions for the population it seeks to influence and is taught on the education level of the intended population. The main focus of the programming/intervention should be to recruit and retain African Americans and Hispanic students in the healthcare workforce pipeline.
3. *Ability to be shared*: A "Best Practice" is a program that can be shared and contains a curriculum that is transferable and generalizable to any population. It can be easily sustained, replicated and applied to meet the needs of a diverse population with different ethnic and cultural beliefs.
4. *Ability to be improved*: As the environment changes, a "Best Practice" program can be improved, adapted, enhanced or modified in order to successfully meet the new needs of the population it is serving.
5. *Effective*: A "Best Practice" program provides results that demonstrate it has effectively accomplished its intended goals for vested stakeholders including students, educators, funders and communities. Results can include qualitative or quantitative data, as well as include personal narratives.

After substantial research and evaluation, Texas AHEC East feels that it is most accurate to recommend *characteristics* for implementation and *not individual programs* for implementation. In our research we have found that it is the common and shared characteristics (that are identified above) that make a program successful. To recommend individual programs themselves for implementation and possible replication without further in-depth research on each individual program would be misleading.

Thus, based on our findings in order **to maximize the state's investment in future MHGP** grant competitions we recommend **to give preference to programs** with the following characteristics or in these areas (identified in Task 3) when funding:

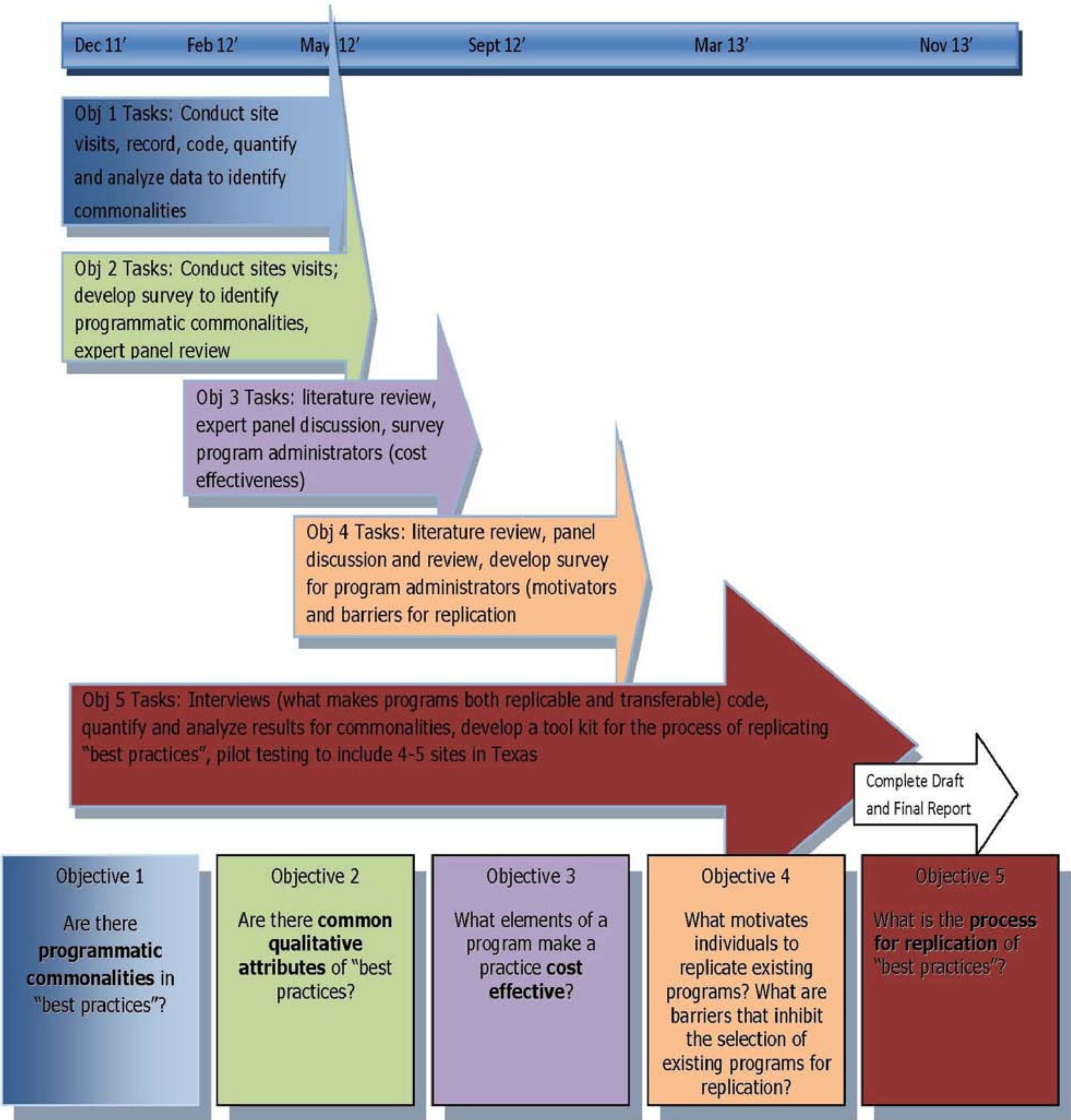
- Programs that are scored against Texas AHEC East's standardized definition of "Best Practice" and score either as a "Best Practice" or "Promising Practice".
- Programs to recruit retain or support minority students into programs that are less than two years of post high school education (certificate programs).
- Programs to recruit retain or support minority students into allied health, pharmacy, and public health careers.
- Programs that show collaboration, partnerships, and vertical alignment.
- Programs that can measure the effectiveness of the program in relation to the cost.
- Programs that have a methodology to measure outcomes.

Recommend Implementation for Further Study: Best Practices 2
Texas AHEC East is prepared to build upon the groundbreaking work discovered in "Best Practices". We feel that the qualifications of our staff as well as our experiences over the last year puts us in a unique position to efficiently advance research on programming to recruit and retain minority students into careers in the health professions. In particular, we believe that we will be able to explore the issue of transitioning a "Promising Practice" into a "Best Practice" as well as the issue of "cost-effectiveness".

Our proposed "Transitioning" research will focus on the development of a process to advance "Promising Practices" (as well as any program scoring below the "Promising Practice" threshold) and will involve the development a transitioning toolkit. Our toolkit will be developed through the collection and analysis of detailed information uncovered through in-depth interviews and focus groups of stakeholders involved with the "Best Practices" programs identified during Phase 1 of this research.

Our proposed "Cost-effectiveness" research will begin with the development of a standardized definition of cost-effectiveness as it pertains to programs and interventions that seek to recruit and retain African-American and Hispanic students into careers in the health professions. From that definition we will develop a methodology for measuring cost-effectiveness in relationship to outcomes.

To accomplish these goals we propose the following research objectives:
Objective 1: Are there **programmatic commonalities** in "Best Practices"?
Objective 2: Are there **common qualitative attributes** of "Best Practices"?
Objective 3: What elements of a program make a practice **cost effective**?
Objective 4: What **motivates** individuals to replicate existing programs?
What are the **barriers** that inhibit the selection of existing programs **for replication**?
Objective 5: What is the **process for replication** of "Best Practices"?



Dec 11'
Feb 12'
May 12'
Sept 12'
Mar 13'
Nov 13'
Obj 1 Tasks: Conduct site visits, record, code, quantify and analyze data to identify commonalities
Obj 2 Tasks: Conduct sites visits; develop survey to identify programmatic commonalities, expert panel review
Obj 3 Tasks: literature review, expert panel discussion, survey program administrators (cost effectiveness)
Obj 4 Tasks: literature review, panel discussion and review, develop survey for program administrators (motivators and barriers for replication
Obj 5 Tasks: Interviews (what makes programs both replicable and transferable) code, quantify and analyze results for commonalities, develop a tool kit for the process of replicating "best practices", pilot testing to include 4-5 sites in Texas
Complete Draft and Final Report
Objective 1
Are there **programmatic commonalities** in "best practices"?
Objective 2
Are there **common qualitative attributes** of "best practices?
Objective 3
What elements of a program make a practice **cost effective**?
Objective 4
What motivates individuals to replicate existing programs? What are barriers that inhibit the selection of existing programs for replication?
Objective 5
What is the **process for replication** of "best practices"?

Appendix A

Annotated Bibliography

A “Best Practices Culture”. (2006, December). Healthcare Financial Management, 42-48.

An interview of Rick Graniere, CFO for Memorial Care Medical Center in Southern California Mr. Graniere tells how MCM developed their “best practices culture based on the vision of former CEO, Tom Collins, to differentiate their brand based on quality. Going from two independent hospitals to a five hospital system, hospital administration knew they had to standardize processes in order to be successful, promote inclusion and communication (build trust) to accomplish a common purpose. They developed best practice protocols for certain types of illnesses, followed them and reported individual results.

Addington, Donald. (2009). Improving Quality of Care for patients with First-Episode Psychosis. Psychiatric Services, 60(9), 1164-1166.

Analyzes some of the tools available for quality improvement and the challenges in their application. The author goes into great detail to define tools and strategies used to access quality of care for patients with first-episode psychosis. Addington defines best practices as the end of life, evidence-based performance measures and standards that reflect attainable benchmarks.

Albert, Mark & Eastern, Donald. (2004). Stroke Best Practices: A Team Approach to Evidence –Based Care. Supplement to the Journal of the National Medical Association, 96(4), 55-205.

Examines the need for more evidence-based stroke prevention methods and testing by highlighting the “Stoke Best Practices” program. This program was designed to assist institutions that lack established stroke centers, with the integration of recent evidence-based recommendations into individualized, in-hospital initiatives. Two programs recognized as best practices were AHA “Get with the Guidelines (GWIG) Stroke Program” and the UCLA Stroke project program.

Barazzetti, G; Borreani, C; Miccinesi, G & Toscani, F. (2010). BMC Palliative Care. 9(1), 1-9.

Discusses the lack of guidelines or standard that identifies best practices in palliative care Researchers to identify best practices of palliative care by analyzing statements on practice and ethics of palliative care expressed by the main health organizations to show which dimensions of end of life care are taken into consideration. Author state that a model of best practice in palliative care should be flexible and discussable and grounded and implicit model. Researchers carried out a qualitative analysis of the statements on -that should be considered: symptoms, relational and social areas, preparations, existential conditions as well as en of life decisions, quality of life and dignity.

Besculides, M; Zaveri, H; Farris, R & Will J. (2006). Identifying Best Practices for WISEWOMAN programs, using a Mixed-Method Evaluation. Preventing Chronic Disease: Public health research, practice and policy, 3(1).

Describes the implementation, methods and results of a study conducted to identify best practices in implementing lifestyle interventions in the CDC’s WISEWOMAN program The authors used a mixed-methods method evaluation, to develop a strategy for identifying best practices. The multistep process included: selecting the practices within each theme that may be a best practice, determining the purpose of the practice of interest, determining the purpose of the practice, determining whether the purpose varies across sites and developing simple categories of the purpose.

Billings, Diane; Connors & H; Skiba, D. (2001). Benchmarking Best Practices in Web-Based Nursing Courses: Advances in Nursing Science, 23(3), 41-52.

Describes the process used by researchers (benchmarking) to determine best practices in web-based nursing courses. Researchers used statistical analysis to compare the results of surveys given to nursing students at three different schools in 14 themes. The survey focuses on reasons for using technology to the outcomes of its use. Best practices in the article contained the seven principles of good practice in undergraduate education by Chickering and Gamson.

Blackburn, George. (2005). Teaching, Learning, Doing: Best Practices in Education. American Journal of Clinical Nutrition, 82 (suppl.).

Examines the academy at Harvard Medical School's methodology to develop best practices in teaching that will equip future doctors with the tools necessary to reduce health illiteracy, promote positive changes in student and parents' behavior. The author uses the National Heart Lung and Blood Institute clinical guidelines on obesity, the Surgeon General's report on physical activity and obesity to create an easily adapted evidenced-based blueprint that builds on previous knowledge.

Bridgewater, B; Hooper, T; Munch, C; Hunter, S; Oppell U; Livesey, S et al. (2006). Mitral repair best practice: Proposed standards. International cardiology and surgery, 92, 939- 944.

Researchers sought to define best practice standards for mitral value repair surgery by analyzing the literature using a multidisciplinary panel to achieve consensus regarding providing high quality mitral valve repair service. Nineteen recommendations were made and they were subdivided into six areas: surgical training, intraceperative transoesophageal, echocardiography, surgery for a trial fibrillation audit, cardiology and imaging issues.

Brod, M; Tesler, L; Christensen, T. (2009). Qualitative research and Content validity: Developing best practices based on science and experience. Quality of Life Research. 18. 1263-1278.

This article provides an overview of the literature on qualitative research and content validity using scientific methodology and the authors' experiences. The authors' identify and describe best practices for establishing content validity using patient-reported outcome (PRO) measures. Authors state that it is important to develop best practices based on grounded theory to maintain scientific integrity of the research process in order to maintain credibility. "Best practices for qualitative research must include both the conceptual and the logistical issues, as theory without implementation is not useful".

Craw, J; Gardner, L; Rossman, A; Gruber, D; Noreen, O; Jordan, D; Rapp, R et al. (2010). Structural factors and Best Practices in implementing a linkage to HIV care program using the ARTAS model. BMC Health Services Research, 10, 246.

Examines the data collected from the Antiretroviral Treatment Access Studies II project (ARTAS II), which tests the success in linking clients to HIV care in an effort to discover best practices Best practices were defined as practices of program implementation that multiple study personnel considered critical to the overall success of the linkage to care program. Best practices included: start up, initiating and implementing, distinguishing ARTAS, marketing the program, sustaining referrals, transportation for the linkage coordinator, graduated disengagement and support through supervision.

Dean, E; Schwerin & M; Robbins. (n.d). A Comparison of usability assessment methods applied to the US Navy's Performance Management and appraisal system. RTI International. Research Triangle Park, NC.

This article examines best practices of in usability testing of computers based software as teaching tools used in the US Navy. The best practice method for implementing user friendly software was to have testers that represents real users of the system and observes and records what participants do and say. The results of the study recommended that usability researchers analyze the data, diagnose the problems and recommend changes to fix the problems

Dennerlein, J; Donk, C & Perry, M. (2009). Safety Science, 47(5), 636-639.

Researchers in this article describe an experimental study conducted to develop and test an audit tool that assesses compliance with best practices guidelines for portable ladders. It uses applications in the construction industry. Researchers sought to quantify compliance to best practices using the Heinrich pyramid, which identifies many areas be used to measure ladder safety performance.

Desai, A; Bolus, R; Nissenson, A; Bolus, S; Solomon, M; Khawar, O. et al. (2008). Indentifying Best practices in Dialysis Care: Results of cognitive interviews and a National survey of dialysis providers. Clinical Journal of Society Nephrology, 3, 1066-1076.

Researchers seek to explore the wide variation of adjusted outcomes across dialysis facilities. Despite the dissemination of standardized guidelines in the K/DOQI, there is a 30% variance between top and bottom performing facilities. Researchers sought to catalogue "best practices" that may account for these variations in outcomes. This multidiscipline study identified 155 candidate best practices to use which are outlined in "Identifying Best Practices in Dialysis (IBPid) guideline.

Dicks, Linda. (2003, May/June). Exploring some of Michigan's best practices. Michigan Health and Hospital Magazine, 26-29.

This article highlights some of the best practices used in Michigan to improve access to and quality of health for its citizens. The author discusses how the Prostate Cancer Options Program at Henry Ford Hospital allows patients to gather all the necessary information in a single session. This technique includes all the specialists that will be involved in the patients care from the nurse coordinator to the radiation oncologist. The patient is involved in the planning process, which enhances program success. The author also highlights the efforts of the Youth for Truth coalition in promoting smoking cessation.

Draugalis, J; Coun, S & Plaza, C. (2008). Best Practices for survey research report: A synopsis for authors and reviewers. American Journal of Pharmaceutical Education, 72(1), Article 11.

Researchers examine the historical and current use of surveys as the primary research method in the Journal of Pharmaceutical Education between 2005 and 2006. Researchers identify inappropriate use of and interchanging between the terms "survey and questionnaire". This paper uses the ten guiding questions established in the Best Practices for survey and public opinion research to determine what a "best practice" for survey research should be: 1) clearly defined research question 2) authors select samples that will represent the population to be studied 3) authors design balances cost with errors 4) describes the research instrument 5) instrument was pretested 6) Quality control measurements were described 7) Response rate was sufficient to enable generalizing to the target population.8) statistical, analytic and reporting techniques were appropriate to the data collected 9) evidence of ethical treatment of human subjects provided 10) authors transparent to ensure evaluation and replication.

Draugalis, J & Plaza, Cecilia. (2009). Best Practices for survey research reports revisited: Implications of Target population probability sampling and response rate. American Journal of Pharmaceutical Education, 73(8), Article 142.

This article revisits an earlier article that examines best practices for survey research reports. It clarifies and expands specifically on why a response rate of 80% is required when generalizing results to all college/schools of pharmacy, but only 50-60% response rate is required for other types of populations. Authors state that target population and probability sampling is a key factor in the population of US colleges and schools of pharmacy (relatively small) compared to the population at large.

Easles, J; Pinney, J; Stevens, R & Roberston, D. (2008). Methodology capture: Discriminating between the "best" and the rest of community practice. BMC Bioinformatics, 9, 359.

Researchers create an approach for capturing methodology from literature in order to identify and define best practices. Researchers defined best practice at the most efficient (and effective) declaration of the process that describes the implementation of a specific methodology. Researchers used molecular phylogenetics as the subject area to find best practices examples, using data extraction techniques of full-text scientific articles. They used highly published and widely collaborated searchers (experts) to analyze the influence of authority on community practice.

Glazer, William, (1994). What are Best Practices?" Understanding the concept. Hospital and Community Psychiatry, 45(11), 1067-1068.

This article is an introduction to the series of quarterly columns entitled "Best Practices". Dr. Glazer defines best practices as a forum in which mental health care practitioners and administrators can communicate pertinent and timely information about successful outcomes. Authors can share methods of effectiveness of different aspects of clinical care through effectiveness studies and randomized, controlled research designs that demonstrate efficacy of treatment. The author uses the "Best Practices" column as a forum for peer review, utilization review and as a provider resource using recommendations from hospital staff and professional associations.

Gossmeier, J; Terry, P; Cipriotti & A; Burtaine, J. (2010, January/February). Best Practices in Evaluating Worksite Health Promotion Programs. The Art of Health Promotion, 1-9.

Defines best practices elements in health program evaluation. Author's modalities, and population-based health awareness programs, comprehensive communication strategy, incentive models, biometric and prevention health screenings, dedicated on-site staff and integrated programs as important elements.

Green, L.W. (2001). From Research to Best Practices in other Settings and Populations. American Journal of Health Behavior, 23(3), 165.

Discusses examples of best practices in health promotions and analyzes the status of "best practices" thinking, its application in health promotion practice and generalizing research to alternate populations, places and times. Best practices in health promotion is defined as applying some major degree to the application of rigorous behavioral research and planning methods (hard-nosed, trial and error) outcome only studies, fuzzy systems research with immediate only or intermediate only variables and investigator centered studies in unrepresented populations which can be generalized

from a wide variety of population and situations. The author suggest that “best practices” be changed to best processes rather than packaged interventions to include: ways to engage the community, ways to assess the needs and circumstances of the community or populations resources, planning, matching needs among others.

Groah, S L; Libin, A; Lauderdale, M; Knoll, T; Dejong, G & Hsich, T. (2009). Beyond the Evidenced-Based practice paradigm achieve Best Practice in Rehabilitation Medicine: A Clinical Review. Physicians Med Rehabilitation, 1(10), 941-950.

Defines best practice as “a practice that, on rigorous evaluation, demonstrates success, has an impact and can be replicated. The authors provide seek to provide clarity to the concept of best practice in the contest of rehabilitation medicine.

Grol, Richard & Grimshow, J. (2003). From Best Evidence to best practice: Effective implementation of change in patients’ care. Lancet, 362, 1225-1230.

Evidence suggests that to change behavior, comprehensive approaches at different levels (doctor, team, practice, hospital, and environment) need to take place that tailors to the specific needs of the target group and setting. Examines best practices for introducing evidence and clinical guidelines into routine daily practice. Best practice methods recommend using “all changes in all settings” based on the following criteria: prepare well, involve relevant people, develop a proposal for change that is evidenced bases, feasible and attractive, study the main difficulties in achieving the change and select a set of strategies and measures at different levels linked to the specific problem. Best practice recommendations included defining indicators for measurement and monitoring progress continuously on regular intervals, enjoy working on making patients care more effective, efficient, safe and friendly.

Herrman, Helen. (2010). WPA Project on Partnerships for Best Practices in Working with Service Users and Carers. World Psychiatry, 9(2), 127-128.

Describes the recommendations from the international mental health community on best practices. Its purpose is to aid in the planning and implementing of mental health programs. The primary need is to develop a unified approach to advocacy for mental health and human rights at country and international levels. The partnership drafted a series of ten recommendations about the changes: respects human rights, create legislation policy and clinical practice relevant to the lives and care of people with mental disorders, that the best clinical care of any person in acute or rehabilitation situation is done in collaboration between the users, the caregivers and the clinicians, improvements in mental health education, research and quality improvements, enhancing user and career empowerment through the development of self-help groups, participation in service planning, management boards and the activities of professional societies, employment of people with mental health disabilities in mental health service provision, user-run community center and the creation of inclusive local anti-stigma programs.

Hogg, W et al. (2006). Promoting best practices for control of respiratory infections. Canadian Family Physician, 52, 111-116.

Researchers discuss the effectiveness of strategies used to improve practice behavior change related to controlling the spread of respiratory infections such as SARS. Researchers designed a study to access whether short-term outreach facilitated interventions (one of the most effective strategies for

behavior change) could be effective in improving the control of respiratory infections in family physician offices. In order to indentify best practices, researchers gathered an expert Advisory Committee to conduct a literature review. The results were: give masks to patients with cough or fever, direct patients with cough and fevers to clean their hands with alcohol-based gel, ensure patients with cough and fever sit a least 1 meter away from all others in the waiting area, have signs to inform patients about these practices and prepare them to follow the directions, disinfect surfaces that might have been contaminated with respiratory secretions following coughing or sneezing, provide masks and alcohol-based hand gel to physician and staff who have contact with patients.

Hood, J & Smith, A. (2009). Developing a "Best Practices" Influenza Vaccination Program for Health Care Workers: An evidence-based Leadership Modeled program. American Academy Occupational Health Nursing Journal, 57, 308-312.

Describes best practice elements as evidenced-based. The authors chose to use a leadership-modeled program as an example that measured healthcare workers vaccination improvement rates. Results from the study using the prescribed method saw vaccination increases from 66% to 77% in year one and 77% to 84% in year two.

Key Elements of Best practice in aid for Trade. (2008). Organization for Economic Co-operation and Development. OECD Conference Centre. Paris.

This article highlights best practices in Aid for Trade using the Paris Declaration of Aid Effectiveness model as an example. Aid effectiveness principles included five broad principles on how to deliver and manage aid accompanied by monitorable plans which accomplished it goals and objectives, decrease poverty and inequality. Principles were: Ownership, alignment, harmonization, managing for results and mutual accountability. Best practice approaches to aid for trade initiatives included:

1. Having a good knowledge of the domestic economy
2. Mainstreaming trade into poverty reduction strategies and national development plans
3. Including aid for trade strategies objectives that strengthen constituencies for reform.

Kleinig, TJ; Kimber, TE & Thompson, PD. (2009). Stoke Prevention and Stroke Thrombolysis Quantifying the Potential Benefits of Best Practice Therapies. Medical Journal of Australia, 190, 678-682.

Discusses optimal modification of risk factors as a best practice to predict and prevent strokes. Smoking, blood pressure and anticoagulation have been proven to increase the risk of strokes. The results of the research in this study conclude that strokes remain preventable specifically in younger patients yet on a small proportion of patients currently benefit from the best practice method currently being used, thrombolysis.

Laurie-Shaw, B; Taylor, W & Roach, C. (2006). Focus on Clinical Best Practices Patients Safety and operational efficiency, 10, 50-57.

MOE (Medication Order Entry/ Medication Administration Record) electronic computer systems, initial implementation and how nurses transitioned from a paper based to paperless system. Nursing informatics was an integral part of the implementation process. Understanding nursing workflow and creating the best methods to educate nurses about MOE/MAR vision and project was vital. As a result of the learning process, a five-step program evolved over several implementations. They included: computer skill self assessment and review by CUSP, pre-class visit to unit to demo MAR

and Q &A, a four hour hands on MOE/MAR functionality class, post class review (hands-on) prior to go live, post go-live functionality review and self assessment by CUSP. As a result of the implementation of MOE/MAR, medication information is clearer (few transcription errors), patient medication information is available more quickly and can be obtained in more formats.

Liberman, S; Ainsworth, M; Asimakis, G; Thomas, L; Cain, L; et al. (2010). Effects of comprehensive educational reforms on academic success in a diverse student body. Medical education, 44, 1232-1240.

Attempts to analyze "best practices" for increasing the academic successes of underrepresented minorities (URM) within changes in integrated medical curriculum (RCM). This article discusses two educational outcomes in the methodology: 1) performance and graduation rates 2) scores on the United States Medical Licensing Exam (USMLE). Analysis of two cohorts of medical students (1995-1997) and (2003-2005) representing pre and post changes in implementing recommended board reforms in education. Identified best practices were

1. Early identification of and intervention for at risk students
2. The provision of multiple support approaches tailored to the curriculum and to the individual students needs
3. Programs that were content-specific to IMC instruction and assessment methods
4. Post acceptance pre-matriculation programs that use instructional and assessment
5. Approaches identical to those in the IMC, identifying students who may benefit from early assistance with study and testing skills
6. Peer tutoring and professional academic counseling which also emphasize curriculum relevant skills.

Mahlmeister, L. (2009). Best Practices in Perinatal Nursing: Promoting Positive Team Interactions and Behaviors. The Journal of Perinatal & Neonatal Nursing, 23(1), 8-11.

Discusses how negative and disruptive behavior between HCP negatively impacts the quality of health for patients, particularly in perinatal nursing. The Joint Commission introduced new standards, to deal with disruptive behaviors which took effect on 1/9/2009 for all accredited hospitals and ambulatory care facilities in the US. With input from all stakeholders (The Joint Commission 8, ISMP 2, The American College of Obstetricians and Gynecologist 3, The Center for American Nurses a "Code of Conduct" was created. A best practice is defined as 1) deemed appropriate based on evidence-based practice guidelines, professional association recommendation and/or consensus opinion of experts.

Matusickey, Carol & Russell, Carol. (2009). Best Practices for parents: What is happening in Canada? Pediatric Child Health, 14(10), 664-665.

Addresses the importance of parenting on child development and young adult behavior compared to actual parenting skills and knowledge. Comparing two major studies, the National Longitudinal Survey of children and Youth and the National Institute of Child Health and Human Development, results indicated that there is a need to "develop programs that increase parenting knowledge, confidence and skills. The authors' specify the following as effective systems of parental education and support: providing opportunities for parents to be engaged in developing programs, ensuring that programs are evidenced-based and evaluated, providing qualities training to service providers, ensuring adequate resources are available to sustain the implementation of the program.

McGraw, S; Larson, M; Foster, S; Kresky-Wolff, M; Bothelho, E; Elstand, E et al. (2009). Adopting Best Practices: Lessons in the collaborative initiative to help end Chronic Homelessness. (CICH). Journal of Behavioral Health Services and Research, 37(2), 197-121.

Summarizes the results of the CICH and their models of best practices used to support their clients in housing. The goal was to provide supportive services using clinical practices shown to be effective or "based on sound evidence" in the engagement and retention of clients in permanent housing. The best practice methods used in this study were ACT and MCI, because of the clinical practices that have shown to be effective.

McIvor, A; Lauser, J; Assaad, J; Brosky, G; Demarest, P; Desmarais, P et al. (2009). Best practices for smoking cessation interventions in primary care. Cancer Respiratory Journal, 16(4), 129-134.

This article outlines the guidelines which provide evidence-based recommendation on tobacco dependence in America, Europe and Australia. These guidelines summarize the most effective methods found in more than 6000 peer-reviewed articles and abstracts regarding smoking assessment and treatments published during the last 25 years.

Mignone, J; Bartlett, J; Oneil, J & Orchard, T. (2007). Best Practices Intercultural health: five case studies in Latin America. Journal of Ethno biology and Ethno medicine, 3(31), Retrieved from http://www.ehtnobiomed.com/content/3/1/31.

Authors compared case studies on intercultural health using "best practices" criteria to access whether current indicatives are successful and to what degree. Authors use the best practice criteria from a study conducted by the National Aboriginal Health Organization of Canada and defined best practice as. 1) tangle and positive impact on the individual and population served 2) sustainable, responsible and relevant to patient and community health needs as well as cultural and environmental realities 3) directly focused, improve access, coordinate and integrate services 4) efficient and flexible, demonstrate leadership, be innovative 5) show potential for replication, identify health and policy needs and have the capacity for evaluation.

Mold, J & Gregory, M. (2003). Best Practices Research. Family Medicine, 35(2), 131-134.

This article describes what "best practices means in Clinical/Medical management. Best practice is defined as a systematic process used to identify, describe, combine and disseminate effective clinical and/or management strategies developed and refined by practicing clinicians. To be used as an improvement tool. The researchers use approaches found in literature reviews and texted best practice methods with a practice-based research network. The rationale is that researchers observe current methods of patient delivery and practice process, compared to others in the research results with everyone.

Napoles-Springer, A & Perez-Stable, E. (2001). The role of culture and language in Determining Best Practices. Journal of General Internal Medicine, 16, 493-495.

This article discusses the impact of policy changes on minority health issues, specifically as it relates to how research determines what is considered a "best practice". The author highlighted language barrier as influencing access to adequate health care and defined cultural norms that have been used in research studies based on middle class White America. The authors call for the need to reassess measurements and instruments used for data collection by addressing issues of cultural and linguistic suitability to improve our ability to address health disparities and develop service delivery models that are truly best practices for each population.

Parkin, Rebecca. (2004). Communications with research participants and communities: foundation for best practices. Journal of Exposure Analysis and Environmental Epidemiology, 14, 516-523.

Explores the history between researchers and their participants and explains the history between researchers and their participants. Researchers have failed to fully explain results/findings of studies to participants. Communities and research participants feel that they have a right to be equal partners and have access to the results. The researchers seek to discover best practices in communicating with study participants. The authors recognize that there is an issue on how to identify the best approach for any one study and examine frameworks that can provide bases for research communication approaches.

Philipsen, Nanya. (2004). Promoting and Implementing evidence-based, Best practices in childbirth education. The Journal of Perinatal Education, 13(3), 51-57.

Discussed the need for promoting and implementing evidence based best practices in child birth education and examines why health care professional may be continuing unsafe childbirth methods, highlighting the emergence of evidence based practice. Defines the concept of "best practice" has combining the systematic use of evidence with the knowledge of the individual case and be more open to evaluation the quality of evidence and sharing how it is used in their practice.

Purcell, John. (2006). Best practice and Best fit: Chimera or Cul-de-sac? Human Resource Management Journal, 9(3), 26-41.

Summarizes the popular dispute about a "universal best practice" method in human resource management (HRM), also referred to as high performance work practices (HCM). Purcell explains the history of this practice and examines the theories behind it and why this practice should not be considered a "universally" accepted model. The author recommends that the architecture of human processes within the HRM should be the primary focus and that these processes should be transformed to "suit the changing needs of the organization".

Romanelli, F; Bird, E, & Ryan, M. (2008). Learning Styles: A Review of Theory, Application and Best practices. American Journal of Pharmaceutical Education, 73(1), Article 9.

Reviews the various learning styles of theory, how they have been applied and what are considered to be the "best practices" of learning styles. The authors' state that a "best practice" approach might involve employing a variety of teaching styles identifies the benchmark definition of learning styles as cognitive, effective, and psychosocial behaviors that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment.

Rosenfield, Richard & Shiffman, Richard. (2009). Clinical practice guidelines development manual: A quality-driving approach for translating evidence into action Otolaryngology–Head and Neck Surgery, 140(6), S1-S43.

Researchers systematically describe the principles and practices used successfully by the American Academy of Otolaryngology Head and Neck Surgery to produce quality driven, evidence-based guidelines using efficient and transparent methodology for action-ready recommendations with multidisciplinary applicability: Guidelines are defined as "systematically developed statements to assist practitioners and patient decisions about appropriate healthcare for specific clinical circumstances. Guidelines are measured by: explicit scope and purpose, stakeholder involvement and rigor of developments, applicability and editorial independence. Trainees in evidence-based medicine learn a stepwise process whereby they ask questions, acquire the evidence, appraise it critically, apply the evidence, analyze the outcome and adjust practice accordingly.

Sharek, P; Mullican, C; Lavanderos, etal. (2007). Best Practices Implementation: Lessons learned from 20 Partnerships. Joint Commission on Accreditation of Healthcare Organizations, 33(12), 16-26.

Examines the existing translation literature on barriers that partnerships have in successfully implementing practices and the successful solutions that were used to overcome them. A best practice was defined as evidence-based or consensus-based interventions that have reliably led to an improved outcome.

Shikora, S; Kruger, R; Blackburn, G; Fallon, J; Harvey, A; Johnson, E, et al. (2009). Best Practices in Policy and Access (Coding and Reimbursement) for weight loss surgery, 17, 918-923.

Authors seek to update evidence based best practices guidelines for coding and reimbursement and establish policy and access standards for weight loss surgery. The authors define best practice as evidence-based and used an expert panel to determine the quality of the evidence, which was discussed in a previous paper. Although there is a substantial body of literature that weight loss surgery improves obesity-related co-morbidities but there is no uniform approach for determining patient appropriateness for surgery.

Shobet, Linda & Renaud, Lise. (2006). Critical Analysis on Best Practices in health Literacy. Canadian Journal of Public Health, 97(2), S10-S13.

Reviews examples of best practices in health literacy were presented at the 2nd Canadian conference on literacy and health. The author's defined "best practice" as clear communication (plain writing and clear verbal communication) necessary for understand health information. Guidelines for plain language included provider indentifying the audience, adapting to their needs and abilities and choosing a clear communication objective, testing readability, awareness of attitudes towards the listener, tone of voice, loudness and pace.

Stoparic, Bojana. (2007). Emphasizing best practices: COA latest standards are oriented towards outcomes. Behavioral Healthcare, 18-19.

This article summarizes improvements made to the current standards in human service fields by the Council on Accreditation (COA). Organizations are asked to demonstrate how they measure impact of services on their client's improvements in organizational performance, client involvement, community partnerships, intended culture and use of data. This goal was to document best practices clearly and how they were linked to positive outcomes. New changes in best practices include:

1. Assessing outcomes
2. Measurable programs
3. Output language.

Thomas, A; Fried, G; Johnson, P & Stilwell, B. (2010). Sharing Best Practices through online Communities of Practices: A case study. Hemans Resource Health, 8(25).

This article presents the results of the Global Alliance for Pre-Service education (GAPS) obtained through online forums designed to discuss issues related to teaching and acquiring competence in family planning, specifically in developing countries health training. Participants were able to share best practices through a web-based community. A best practice was defined as the best approach to sharing family practice competencies. Competences were defined as "an ability to do something well, measured against a standard", especially ability acquired through experience or training.

Tillett, Jackie & Kruger, Bradley. (2009). Journal of Perinatal and Neonatal Nursing. 102-104.

Examines the need for more labor and delivery units to describe, develop and adopt best practices guidelines into their current systems. This article uses the Joint Commission definition of best practices as "evidence-based" or consensus-based, interventions that have reliability led to an improved outcome". Clinical strategies for rapid adoption of best practices include: identification of goals of the unit, (such as increasing breast feeding rates), decreasing elective induction rates or implementing drill-based learning, development of guidelines that are evidence-based and feasible with setting the budget and understanding the barriers to implementation and planning.

Tremblay, D; Drouin, D; Lang, A; Roberg, D; Ritchie, & Plante, A. (2010). Interprofessional collaborative practice within cancer teams: Translating evidence into action. A mixed methods study protocol. Implementation Science, 5(53).

Researchers in this article, sought to examine the uptake of evidence-based recommendations from best practice guidelines intended to enhance interprofessional collaborative practices within cancer teams. Researchers used guidelines from the Registered Nurses Association of Ontario (RNAO) as a best practice. Study objectives included assessing how professional knowledge beliefs and the practice environment support or impede the adoption of EIPCP (transformative model for cancer services delivery), assess how patients' knowledge beliefs and needs influence this adoption process, describe the impact of an educational workshop and mentoring program on the uptake and sustainability of EIPCP over a six to eight month period. I assume the results of the study were still pending as research failed to specify what they were in this article.

Ward, D; Evenson, K; Vaughn, A; Rodders, A & Trojano, R. (2005). Accelerometer use in Physical activity: Best practices and research recommendations. Medicine and Science in Sports Exercise, 37(11), S582-S588.

Discusses best practices and research recommendations for using accelerometers to measure physical activity. This article outlines the need for consistency in measurement standards. Best practice recommendations included:

1. Monitor selection (making sure that monitors have sufficient data processing and storage capacity to measure movement over time.
2. Assessing quality and dependability (ensuring that coefficient of variability (CV) measures accurately according to the number of monitors used) establishing guidelines to detect monitors that are not yielding counts within the expected level of error
3. Using multiple monitors
4. Defining what constitutes a “day” and a “bout”
5. Establishing field practices
6. Incorporating processes for handling incomplete data
7. Creating standardized reports.

Which Best Practices are best for me? Carnegie Mellon Software Engineering Institute. US Department of Defense. Pittsburgh, PA. Retrieved from www.cert.org/archive/pdf/secureit_bestpractices.pdf.

Researchers highlight the existing body of literature regarding information security best practices, processes and guidelines. The article noted best practices qualities as being 1) focused on tangible assets (data and information) and 2) technology assets (information systems and their supporting technical infrastructures. This article recommended that best practices assess information security use, security requirements, risk, practicality and value as the primary selection criteria. The preferred best practice method recommended was a data driven approach (IAP).

Winston, Flara & Jacobson, Lela. (2010). A practical approach for applying best practices in behavioral interventions to injury prevention. Injury Prevention, (16), 107-112.

Defines best practice as a six step approach that clearly articulates vision or key outcomes that are specific to a goal. The best practice methodology used is the interventionist programmed theory. It combines key outcomes, behavioral objectives and target constructs into a clear actionable plan that is theoretically –grounded and evidence-based.

Annotated Bibliography

A “Best practices Culture”. (2006, December). Healthcare Financial Management, 42-48.

An interview of Rick Graniere, CFO for Memorial Care Medical Center in Southern California Mr. Graniere tells how MCM developed their “best practices culture based on the vision of former CEO, Tom Collins, to differentiate their brand based on quality. Going from two independent hospitals to a five hospital system, hospital administration knew they had to standardize processes in order to be successful, promote inclusion and communication (build trust) to accomplish a common purpose. They developed best practice protocols for certain types of illnesses, followed them and reported individual results.

Addington, Donald. (2009). Improving Quality of Care for patients with First-Episode Psychosis. Psychiatric Services, 60(9), 1164-1166.

Analyzes some of the tools available for quality improvement and the challenges in their application. The author goes into great detail to define tools and strategies used to access quality of care for patients with first-episode psychosis. Addington defines best practices as the end of life, evidence-based performance measures and standards that reflect attainable benchmarks.

Albert, Mark & Eastern, Donald. (2004). Stroke Best Practices: A Team Approach to Evidence –Based Care. Supplement to the Journal of the National Medical Association, 96(4), 55-205.

Examines the need for more evidence-based stroke prevention methods and testing by highlighting the “Stoke Best Practices” program. This program was designed to assist institutions that lack established stroke centers, with the integration of recent evidence-based recommendations into individualized, in-hospital initiatives. Two programs recognized as best practices were AHA “Get with the Guidelines (GWIG) Stroke Program” and the UCLA Stroke project program.

Barazzetti, G; Borreani, C; Miccinesi, G & Toscani, F. (2010). BMC Palliative Care. 9(1), 1-9.

Discusses the lack of guidelines or standard that identifies best practices in palliative care Researchers to identify best practices of palliative care by analyzing statements on practice and ethics of palliative care expressed by the main health organizations to show which dimensions of end of life care are taken into consideration. Author state that a model of best practice in palliative care should be flexible and discussable and grounded and implicit model. Researchers carried out a qualitative analysis of the statements on -that should be considered: symptoms, relational and social areas, preparations, existential conditions as well as en of life decisions, quality of life and dignity.

Besculides, M; Zaveri, H; Farris, R & Will J. (2006). Identifying Best Practices for WISEWOMAN programs, using a Mixed-Method Evaluation. Preventing Chronic Disease: Public health research, practice and policy, 3(1).

Describes the implementation, methods and results of a study conducted to identify best practices in implementing lifestyle interventions in the CDC’s WISEWOMAN program The authors used a mixed-methods method evaluation, to develop a strategy for identifying best practices. The multistep process included: selecting the practices within each theme that may be a best practice, determining the purpose of the practice of interest, determining the purpose of the practice, determining whether the purpose varies across sites and developing simple categories of the purpose.

Billings, Diane; Connors & H; Skiba, D. (2001). Benchmarking Best Practices in Web-Based Nursing Courses: Advances in Nursing Science, 23(3), 41-52.

> Describes the process used by researchers (benchmarking) to determine best practices in web-based nursing courses. Researchers used statistical analysis to compare the results of surveys given to nursing students at three different schools in 14 themes. The survey focuses on reasons for using technology to the outcomes of its use. Best practices in the article contained the seven principles of good practice in undergraduate education by Chickering and Gamson.

Blackburn, George. (2005). Teaching, Learning, Doing: Best Practices in Education. American Journal of Clinical Nutrition, 82 (suppl.).

> Examines the academy at Harvard Medical School's methodology to develop best practices in teaching that will equip future doctors with the tools necessary to reduce health illiteracy, promote positive changes in student and parents' behavior. The author uses the National Heart Lung and Blood Institute clinical guidelines on obesity, the Surgeon General's report on physical activity and obesity to create an easily adapted evidenced-based blueprint that builds on previous knowledge.

Bridgewater, B; Hooper, T; Munch, C; Hunter, S; Oppell U; Livesey, S et al. (2006). Mitral repair best practice: Proposed standards. International cardiology and surgery, 92, 939- 944.

> Researchers sought to define best practice standards for mitral value repair surgery by analyzing the literature using a multidisciplinary panel to achieve consensus regarding providing high quality mitral valve repair service. Nineteen recommendations were made and they were subdivided into six areas: surgical training, intraceperative transoesophageal, echocardiography, surgery for a trial fibrillation audit, cardiology and imaging issues.

Brod, M; Tesler, L; Christensen, T. (2009). Qualitative research and Content validity: Developing best practices based on science and experience. Quality of Life Research. 18. 1263-1278.

> This article provides an overview of the literature on qualitative research and content validity using scientific methodology and the authors' experiences. The authors' identify and describe best practices for establishing content validity using patient-reported outcome (PRO) measures. Authors state that it is important to develop best practices based on grounded theory to maintain scientific integrity of the research process in order to maintain credibility. "Best practices for qualitative research must include both the conceptual and the logistical issues, as theory without implementation is not useful".

Craw, J; Gardner, L; Rossman, A; Gruber, D; Noreen, O; Jordan, D; Rapp, R et al. (2010). Structural factors and Best Practices in implementing a linkage to HIV care program using the ARTAS model. BMC Health Services Research, 10, 246.

> Examines the data collected from the Antiretroviral Treatment Access Studies II project (ARTAS II), which tests the success in linking clients to HIV care in an effort to discover best practices Best practices were defined as practices of program implementation that multiple study personnel considered critical to the overall success of the linkage to care program. Best practices included: start up, initiating and implementing, distinguishing ARTAS, marketing the program, sustaining referrals, transportation for the linkage coordinator, graduated disengagement and support through supervision.

Dean, E; Schwerin & M; Robbins. (n.d). A Comparison of usability assessment methods applied to the US Navy's Performance Management and appraisal system. RTI International. Research Triangle Park, NC.

This article examines best practices of in usability testing of computers based software as teaching tools used in the US Navy. The best practice method for implementing user friendly software was to have testers that represents real users of the system and observes and records what participants do and say. The results of the study recommended that usability researchers analyze the data, diagnose the problems and recommend changes to fix the problems

Dennerlein, J; Donk, C & Perry, M. (2009). Safety Science, 47(5), 636-639.

Researchers in this article describe an experimental study conducted to develop and test an audit tool that assesses compliance with best practices guidelines for portable ladders. It uses applications in the construction industry. Researchers sought to quantify compliance to best practices using the Heinrich pyramid, which identifies many areas be used to measure ladder safety performance.

Desai, A; Bolus, R; Nissenson, A; Bolus, S; Solomon, M; Khawar, O. et al. (2008). Indentifying Best practices in Dialysis Care: Results of cognitive interviews and a National survey of dialysis providers. Clinical Journal of Society Nephrology, 3, 1066- 1076.

Researchers seek to explore the wide variation of adjusted outcomes across dialysis facilities. Despite the dissemination of standardized guidelines in the K/DOQI, there is a 30% variance between top and bottom performing facilities. Researchers sought to catalogue "best practices" that may account for these variations in outcomes. This multidiscipline study identified 155 candidate best practices to use which are outlined in "Identifying Best Practices in Dialysis (IBPid) guideline.

Dicks, Linda. (2003, May/June). Exploring some of Michigan's best practices. Michigan Health and Hospital Magazine, 26-29.

This article highlights some of the best practices used in Michigan to improve access to and quality of health for its citizens. The author discusses how the Prostate Cancer Options Program at Henry Ford Hospital allows patients to gather all the necessary information in a single session. This technique includes all the specialists that will be involved in the patients care from the nurse coordinator to the radiation oncologist. The patient is involved in the planning process, which enhances program success. The author also highlights the efforts of the Youth for Truth coalition in promoting smoking cessation.

Draugalis, J; Coun, S & Plaza, C. (2008). Best Practices for survey research report: A synopsis for authors and reviewers. American Journal of Pharmaceutical Education, 72(1), Article 11.

Researchers examine the historical and current use of surveys as the primary research method in the Journal of Pharmaceutical Education between 2005 and 2006. Researchers identify inappropriate use of and interchanging between the terms "survey and questionnaire". This paper uses the ten guiding questions established in the Best Practices for survey and public opinion research to determine what a "best practice" for survey research should be: 1) clearly defined research question 2) authors select samples that will represent the population to be studied 3) authors design balances cost with errors 4) describes the research instrument 5) instrument was pretested 6) Quality control measurements were described 7) Response rate was sufficient to enable generalizing to the target population.8) statistical,

analytic and reporting techniques were appropriate to the data collected 9) evidence of ethical treatment of human subjects provided 10) authors transparent to ensure evaluation and replication.

Draugalis, J & Plaza, Cecilia. (2009). Best Practices for survey research reports revisited: Implications of Target population probability sampling and response rate. American Journal of Pharmaceutical Education, 73(8), Article 142.

This article revisits an earlier article that examines best practices for survey research reports. It clarifies and expands specifically on why a response rate of 80% is required when generalizing results to all college/schools of pharmacy, but only 50-60% response rate is required for other types of populations. Authors state that target population and probability sampling is a key factor in the population of US colleges and schools of pharmacy (relatively small) compared to the population at large.

Easles, J; Pinney, J; Stevens, R & Roberston, D. (2008). Methodology capture: Discriminating between the “best” and the rest of community practice. BMC Bioinformatics, 9, 359.

Researchers create an approach for capturing methodology from literature in order to identify and define best practices. Researchers defined best practice at the most efficient (and effective) declaration of the process that describes the implementation of a specific methodology. Researchers used molecular phylogenetics as the subject area to find best practices examples, using data extraction techniques of full-text scientific articles. They used highly published and widely collaborated searchers (experts) to analyze the influence of authority on community practice.

Glazer, William, (1994). What are Best Practices?” Understanding the concept. Hospital and Community Psychiatry, 45(11), 1067-1068.

This article is an introduction to the series of quarterly columns entitled “Best Practices”. Dr. Glazer defines best practices as a forum in which mental health care practitioners and administrators can communicate pertinent and timely information about successful outcomes. Authors can share methods of effectiveness of different aspects of clinical care through effectiveness studies and randomized, controlled research designs that demonstrate efficacy of treatment. The author uses the “Best Practices” column as a forum for peer review, utilization review and as a provider resource using recommendations from hospital staff and professional associations.

Gossmeier, J; Terry, P; Cipriotti & A; Burtaine, J. (2010, January/February). Best Practices in Evaluating Worksite Health Promotion Programs. The Art of Health Promotion, 1-9.

Defines best practices elements in health program evaluation. Author’s modalities, and population-based health awareness programs, comprehensive communication strategy, incentive models, biometric and prevention health screenings, dedicated on-site staff and integrated programs as important elements.

Green, L.W. (2001). From Research to Best Practices in other Settings and Populations. American Journal of Health Behavior, 23(3), 165.

Discusses examples of best practices in health promotions and analyzes the status of "best practices" thinking, its application in health promotion practice and generalizing research to alternate populations, places and times. Best practices in health promotion is defined as applying some major degree to the application of rigorous behavioral research and planning methods (hard-nosed, trial and error) outcome only studies, fuzzy systems research with immediate only or intermediate only variables and investigator centered studies in unrepresented populations which can be generalized from a wide variety of population and situations. The author suggest that "best practices" be changed to best processes rather than packaged interventions to include: ways to engage the community, ways to assess the needs and circumstances of the community or populations resources, planning, matching needs among others.

Groah, S L; Libin, A; Lauderdale, M; Knoll, T; Dejong, G & Hsich, T. (2009). Beyond the Evidenced-Based practice paradigm achieve Best Practice in Rehabilitation Medicine: A Clinical Review. Physicians Med Rehabilitation, 1(10), 941-950.

Defines best practice as "a practice that, on rigorous evaluation, demonstrates success, has an impact and can be replicated. The authors provide seek to provide clarity to the concept of best practice in the contest of rehabilitation medicine.

Grol, Richard & Grimshow, J. (2003). From Best Evidence to best practice: Effective implementation of change in patients' care. Lancet, 362, 1225-1230.

Evidence suggests that to change behavior, comprehensive approaches at different levels (doctor, team, practice, hospital, and environment) need to take place that tailors to the specific needs of the target group and setting. Examines best practices for introducing evidence and clinical guidelines into routine daily practice. Best practice methods recommend using "all changes in all settings" based on the following criteria: prepare well, involve relevant people, develop a proposal for change that is evidenced bases, feasible and attractive, study the main difficulties in achieving the change and select a set of strategies and measures at different levels linked to the specific problem. Best practice recommendations included defining indicators for measurement and monitoring progress continuously on regular intervals, enjoy working on making patients care more effective, efficient, safe and friendly.

Herrman, Helen. (2010). WPA Project on Partnerships for Best Practices in Working with Service Users and Carers. World Psychiatry, 9(2), 127-128.

Describes the recommendations from the international mental health community on best practices. Its purpose is to aid in the planning and implementing of mental health programs. The primary need is to develop a unified approach to advocacy for mental health and human rights at country and international levels. The partnership drafted a series of ten recommendations about the changes: respects human rights, create legislation policy and clinical practice relevant to the lives and care of people with mental disorders, that the best clinical care of any person in acute or rehabilitation situation is done in collaboration between the users, the caregivers and the clinicians, improvements in mental health education, research and quality improvements, enhancing user and career empowerment through the development of self-help groups, participation in service planning,

management boards and the activities of professional societies, employment of people with mental health disabilities in mental health service provision, user-run community center and the creation of inclusive local anti-stigma programs.

Hogg, W et al. (2006). Promoting best practices for control of respiratory infections. Canadian Family Physician, 52, 111-116.

Researchers discuss the effectiveness of strategies used to improve practice behavior change related to controlling the spread of respiratory infections such as SARS. Researchers designed a study to access whether short-term outreach facilitated interventions (one of the most effective strategies for behavior change) could be effective in improving the control of respiratory infections in family physician offices. In order to indentify best practices, researchers gathered an expert Advisory Committee to conduct a literature review. The results were: give masks to patients with cough or fever, direct patients with cough and fevers to clean their hands with alcohol-based gel, ensure patients with cough and fever sit a least 1 meter away from all others in the waiting area, have signs to inform patients about these practices and prepare them to follow the directions, disinfect surfaces that might have been contaminated with respiratory secretions following coughing or sneezing, provide masks and alcohol-based hand gel to physician and staff who have contact with patients.

Hood, J & Smith, A. (2009). Developing a "Best Practices" Influenza Vaccination Program for Health Care Workers: An evidence-based Leadership Modeled program. American Academy Occupational Health Nursing Journal, 57, 308-312.

Describes best practice elements as evidenced-based. The authors chose to use a leadership-modeled program as an example that measured healthcare workers vaccination improvement rates. Results from the study using the prescribed method saw vaccination increases from 66% to 77% in year one and 77% to 84% in year two.

Key Elements of Best practice in aid for Trade. (2008). Organization for Economic Co-operation and Development. OECD Conference Centre. Paris.

This article highlights best practices in Aid for Trade using the Paris Declaration of Aid Effectiveness model as an example. Aid effectiveness principles included five broad principles on how to deliver and manage aid accompanied by monitorable plans which accomplished it goals and objectives, decrease poverty and inequality. Principles were: Ownership, alignment, harmonization, managing for results and mutual accountability. Best practice approaches to aid for trade initiatives included:

1. Having a good knowledge of the domestic economy
2. Mainstreaming trade into poverty reduction strategies and national development plans
3. Including aid for trade strategies objectives that strengthen constituencies for reform.

Kleinig, TJ; Kimber, TE & Thompson, PD. (2009). Stoke Prevention and Stroke Thrombolysis Quantifying the Potential Benefits of Best Practice Therapies. Medical Journal of Australia, 190, 678-682.

Discusses optimal modification of risk factors as a best practice to predict and prevent strokes. Smoking, blood pressure and anticoagulation have been proven to increase the risk of strokes. The results of the research in this study conclude that strokes remain preventable specifically in younger

patients yet on a small proportion of patients currently benefit from the best practice method currently being used, thrombolysis.

Laurie-Shaw, B; Taylor, W & Roach, C. (2006). Focus on Clinical Best Practices Patients Safety and operational efficiency, 10, 50-57.

MOE (Medication Order Entry/ Medication Administration Record) electronic computer systems, initial implementation and how nurses transitioned from a paper based to paperless system. Nursing informatics was an integral part of the implementation process. Understanding nursing workflow and creating the best methods to educate nurses about MOE/MAR vision and project was vital. As a result of the learning process, a five-step program evolved over several implementations. They included: computer skill self assessment and review by CUSP, pre-class visit to unit to demo MAR and Q &A, a four hour hands on MOE/MAR functionality class, post class review (hands-on) prior to go live, post go-live functionality review and self assessment by CUSP. As a result of the implementation of MOE/MAR, medication information is clearer (few transcription errors), patient medication information is available more quickly and can be obtained in more formats.

Liberman, S; Ainsworth, M; Asimakis, G; Thomas, L; Cain, L; et al. (2010). Effects of comprehensive educational reforms on academic success in a diverse student body. Medical education, 44, 1232-1240.

Attempts to analyze “best practices” for increasing the academic successes of underrepresented minorities (URM) within changes in integrated medical curriculum (RCM). This article discusses two educational outcomes in the methodology: 1) performance and graduation rates 2) scores on the United States Medical Licensing Exam (USMLE). Analysis of two cohorts of medical students (1995-1997) and (2003-2005) representing pre and post changes in implementing recommended board reforms in education. Identified best practices were

1. Early identification of and intervention for at risk students
2. The provision of multiple support approaches tailored to the curriculum and to the individual students needs
3. Programs that were content-specific to IMC instruction and assessment methods
4. Post acceptance pre-matriculation programs that use instructional and assessment
5. Approaches identical to those in the IMC, identifying students who may benefit from early assistance with study and testing skills
6. Peer tutoring and professional academic counseling which also emphasize curriculum relevant skills.

Mahlmeister, L. (2009). Best Practices in Perinatal Nursing: Promoting Positive Team Interactions and Behaviors. The Journal of Perinatal & Neonatal Nursing, 23(1), 8-11.

Discusses how negative and disruptive behavior between HCP negatively impacts the quality of health for patients, particularly in perinatal nursing. The Joint Commission introduced new standards, to deal with disruptive behaviors which took effect on 1/9/2009 for all accredited hospitals and ambulatory care facilities in the US. With input from all stakeholders (The Joint Commission 8, ISMP 2, The American College of Obstetricians and Gynecologist 3, The Center for American Nurses a “Code of Conduct” was created. A best practice is defined as 1) deemed appropriate based on evidence-based practice guidelines, professional association recommendation and/or consensus opinion of experts.

Matusickey, Carol & Russell, Carol. (2009). Best Practices for parents: What is happening in Canada? Pediatric Child Health, 14(10), 664-665.

Addresses the importance of parenting on child development and young adult behavior compared to actual parenting skills and knowledge. Comparing two major studies, the National Longitudinal Survey of children and Youth and the National Institute of Child Health and Human Development, results indicated that there is a need to “develop programs that increase parenting knowledge, confidence and skills. The authors’ specify the following as effective systems of parental education and support: providing opportunities for parents to be engaged in developing programs, ensuring that programs are evidenced-based and evaluated, providing qualities training to service providers, ensuring adequate resources are available to sustain the implementation of the program.

McGraw, S; Larson, M; Foster, S; Kresky-Wolff, M; Bothelho, E; Elstand, E et al. (2009). Adopting Best Practices: Lessons in the collaborative initiative to help end Chronic Homelessness. (CICH). Journal of Behavioral Health Services and Research, 37(2), 197- 121.

Summarizes the results of the CICH and their models of best practices used to support their clients in housing. The goal was to provide supportive services using clinical practices shown to be effective or “based on sound evidence” in the engagement and retention of clients in permanent housing. The best practice methods used in this study were ACT and MCI, because of the clinical practices that have shown to be effective.

McIvor, A; Lauser, J; Assaad, J; Brosky, G; Demarest, P; Desmarais, P et al. (2009). Best practices for smoking cessation interventions in primary care. Cancer Respiratory Journal, 16(4), 129-134.

This article outlines the guidelines which provide evidence-based recommendation on tobacco dependence in America, Europe and Australia. These guidelines summarize the most effective methods found in more than 6000 peer-reviewed articles and abstracts regarding smoking assessment and treatments published during the last 25 years.

Mignone, J; Bartlett, J; Oneil, J & Orchard, T. (2007). Best Practices Intercultural health: five case studies in Latin America. Journal of Ethno biology and Ethno medicine, 3(31), Retrieved from http://www.ehtnobiomed.com/content/3/1/31.

Authors compared case studies on intercultural health using “best practices” criteria to access whether current indicatives are successful and to what degree. Authors use the best practice criteria from a study conducted by the National Aboriginal Health Organization of Canada and defined best practice as. 1) tangle and positive impact on the individual and population served 2) sustainable, responsible and relevant to patient and community health needs as well as cultural and environmental realities 3) directly focused, improve access, coordinate and integrate services 4) efficient and flexible, demonstrate leadership, be innovative 5) show potential for replication, identify health and policy needs and have the capacity for evaluation.

Mold, J & Gregory, M. (2003). Best Practices Research. Family Medicine, 35(2), 131-134.

This article describes what "best practices means in Clinical/Medical management. Best practice is defined as a systematic process used to identify, describe, combine and disseminate effective clinical and/or management strategies developed and refined by practicing clinicians. To be used as an improvement tool. The researchers use approaches found in literature reviews and texted best practice methods with a practice-based research network. The rationale is that researchers observe current methods of patient delivery and practice process, compared to others in the research results with everyone.

Napoles-Springer, A & Perez-Stable, E. (2001). The role of culture and language in Determining Best Practices. Journal of General Internal Medicine, 16, 493-495.

This article discusses the impact of policy changes on minority health issues, specifically as it relates to how research determines what is considered a "best practice". The author highlighted language barrier as influencing access to adequate health care and defined cultural norms that have been used in research studies based on middle class White America. The authors call for the need to reassess measurements and instruments used for data collection by addressing issues of cultural and linguistic suitability to improve our ability to address health disparities and develop service delivery models that are truly best practices for each population.

Parkin, Rebecca. (2004). Communications with research participants and communities: foundation for best practices. Journal of Exposure Analysis and Environmental Epidemiology, 14, 516-523.

Explores the history between researchers and their participants and explains the history between researchers and their participants. Researchers have failed to fully explain results/findings of studies to participants. Communities and research participants feel that they have a right to be equal partners and have access to the results. The researchers seek to discover best practices in communicating with study participants. The authors recognize that there is an issue on how to identify the best approach for any one study and examine frameworks that can provide bases for research communication approaches.

Philipsen, Nanya. (2004). Promoting and Implementing evidence-based, Best practices in childbirth education. The Journal of Perinatal Education, 13(3), 51-57.

Discussed the need for promoting and implementing evidence based best practices in child birth education and examines why health care professional may be continuing unsafe childbirth methods, highlighting the emergence of evidence based practice. Defines the concept of "best practice" has combining the systematic use of evidence with the knowledge of the individual case and be more open to evaluation the quality of evidence and sharing how it is used in their practice.

Purcell, John. (2006). Best practice and Best fit: Chimera or Cul-de-sac? Human Resource Management Journal, 9(3), 26-41.

Summarizes the popular dispute about a "universal best practice" method in human resource management (HRM), also referred to as high performance work practices (HCM). Purcell explains the history of this practice and examines the theories behind it and why this practice should not be considered a "universally" accepted model. The author recommends that the architecture of human processes within the HRM should be the primary focus and that these processes should be transformed to "suit the changing needs of the organization".

Romanelli, F; Bird, E, & Ryan, M. (2008). Learning Styles: A Review of Theory, Application and Best practices. American Journal of Pharmaceutical Education, 73(1), Article 9.

Reviews the various learning styles of theory, how they have been applied and what are considered to be the "best practices" of learning styles. The authors' state that a "best practice" approach might involve employing a variety of teaching styles identifies the benchmark definition of learning styles as cognitive, effective, and psychosocial behaviors that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment.

Rosenfield, Richard & Shiffman, Richard. (2009). Clinical practice guidelines development manual: A quality-driving approach for translating evidence into action Otolaryngology–Head and Neck Surgery, 140(6), S1-S43.

Researchers systematically describe the principles and practices used successfully by the American Academy of Otolaryngology Head and Neck Surgery to produce quality driven, evidence-based guidelines using efficient and transparent methodology for action-ready recommendations with multidisciplinary applicability: Guidelines are defined as "systematically developed statements to assist practitioners and patient decisions about appropriate healthcare for specific clinical circumstances. Guidelines are measured by: explicit scope and purpose, stakeholder involvement and rigor of developments, applicability and editorial independence. Trainees in evidence-based medicine learn a stepwise process whereby they ask questions, acquire the evidence, appraise it critically, apply the evidence, analyze the outcome and adjust practice accordingly.

Sharek, P; Mullican, C; Lavanderos, etal. (2007). Best Practices Implementation: Lessons learned from 20 Partnerships. Joint Commission on Accreditation of Healthcare Organizations, 33(12), 16-26.

Examines the existing translation literature on barriers that partnerships have in successfully implementing practices and the successful solutions that were used to overcome them. A best practice was defined as evidence-based or consensus-based interventions that have reliably led to an improved outcome.

Shikora, S; Kruger, R; Blackburn, G; Fallon, J; Harvey, A; Johnson, E, et al. (2009). Best Practices in Policy and Access (Coding and Reimbursement) for weight loss surgery, 17, 918-923.

> Authors seek to update evidence based best practices guidelines for coding and reimbursement and establish policy and access standards for weight loss surgery. The authors define best practice as evidence-based and used an expert panel to determine the quality of the evidence, which was discussed in a previous paper. Although there is a substantial body of literature that weight loss surgery improves obesity-related co-morbidities but there is no uniform approach for determining patient appropriateness for surgery.

Shobet, Linda & Renaud, Lise. (2006). Critical Analysis on Best Practices in health Literacy. Canadian Journal of Public Health, 97(2), S10-S13.

> Reviews examples of best practices in health literacy were presented at the 2nd Canadian conference on literacy and health. The author's defined "best practice" as clear communication (plain writing and clear verbal communication) necessary for understand health information. Guidelines for plain language included provider indentifying the audience, adapting to their needs and abilities and choosing a clear communication objective, testing readability, awareness of attitudes towards the listener, tone of voice, loudness and pace.

Stoparic, Bojana. (2007). Emphasizing best practices: COA latest standards are oriented towards outcomes. Behavioral Healthcare, 18-19.

> This article summarizes improvements made to the current standards in human service fields by the Council on Accreditation (COA). Organizations are asked to demonstrate how they measure impact of services on their client's improvements in organizational performance, client involvement, community partnerships, intended culture and use of data. This goal was to document best practices clearly and how they were linked to positive outcomes. New changes in best practices include:

1. Assessing outcomes
2. Measurable programs
3. Output language.

Thomas, A; Fried, G; Johnson, P & Stilwell, B. (2010). Sharing Best Practices through online Communities of Practices: A case study. Hemans Resource Health, 8(25).

> This article presents the results of the Global Alliance for Pre-Service education (GAPS) obtained through online forums designed to discuss issues related to teaching and acquiring competence in family planning, specifically in developing countries health training. Participants were able to share best practices through a web-based community. A best practice was defined as the best approach to sharing family practice competencies. Competences were defined as "an ability to do something well, measured against a standard", especially ability acquired through experience or training.

Tillett, Jackie & Kruger, Bradley. (2009). Journal of Perinatal and Neonatal Nursing. 102-104.

Examines the need for more labor and delivery units to describe, develop and adopt best practices guidelines into their current systems. This article uses the Joint Commission definition of best practices as "evidence-based" or consensus-based, interventions that have reliability led to an improved outcome". Clinical strategies for rapid adoption of best practices include: identification of goals of the unit, (such as increasing breast feeding rates), decreasing elective induction rates or implementing drill-based learning, development of guidelines that are evidence-based and feasible with setting the budget and understanding the barriers to implementation and planning.

Tremblay, D; Drouin, D; Lang, A; Roberg, D; Ritchie, & Plante, A. (2010). Interprofessional collaborative practice within cancer teams: Translating evidence into action. A mixed methods study protocol. Implementation Science, 5(53).

Researchers in this article, sought to examine the uptake of evidence-based recommendations from best practice guidelines intended to enhance interprofessional collaborative practices within cancer teams. Researchers used guidelines from the Registered Nurses Association of Ontario (RNAO) as a best practice. Study objectives included assessing how professional knowledge beliefs and the practice environment support or impede the adoption of EIPCP (transformative model for cancer services delivery), assess how patients' knowledge beliefs and needs influence this adoption process, describe the impact of an educational workshop and mentoring program on the uptake and sustainability of EIPCP over a six to eight month period. I assume the results of the study were still pending as research failed to specify what they were in this article.

Ward, D; Evenson, K; Vaughn, A; Rodders, A & Trojano, R. (2005). Accelerometer use in Physical activity: Best practices and research recommendations. Medicine and Science in Sports Exercise, 37(11), S582-S588.

Discusses best practices and research recommendations for using accelerometers to measure physical activity. This article outlines the need for consistency in measurement standards. Best practice recommendations included:

1. Monitor selection (making sure that monitors have sufficient data processing and storage capacity to measure movement over time.
2. Assessing quality and dependability (ensuring that coefficient of variability (CV) measures accurately according to the number of monitors used) establishing guidelines to detect monitors that are not yielding counts within the expected level of error
3. Using multiple monitors
4. Defining what constitutes a "day" and a "bout"
5. Establishing field practices
6. Incorporating processes for handling incomplete data
7. Creating standardized reports.

Which Best Practices are best for me? Carnegie Mellon Software Engineering Institute. US Department of Defense. Pittsburgh, PA. Retrieved from www.cert.org/archive/pdf/secureit_bestpractices.pdf.

Researchers highlight the existing body of literature regarding information security best practices, processes and guidelines. The article noted best practices qualities as being 1) focused on tangible assets (data and information) and 2) technology assets (information systems and their supporting technical infrastructures. This article recommended that best practices assess information security use, security requirements, risk, practicality and value as the primary selection criteria. The preferred best practice method recommended was a data driven approach (IAP).

Winston, Flara & Jacobson, Lela. (2010). A practical approach for applying best practices in behavioral interventions to injury prevention. Injury Prevention, (16), 107-112.

Defines best practice as a six step approach that clearly articulates vision or key outcomes that are specific to a goal. The best practice methodology used is the interventionist programmed theory. It combines key outcomes, behavioral objectives and target constructs into a clear actionable plan that is theoretically –grounded and evidence-based.

Appendix B

zoomerang

East Texas Area Health Education Center (AHEC) Experiential Best Practices

Created: March 18 2011, 2:04 PM
Last Modified: April 25 2011, 7:23 AM
Design Theme: Business Suit Blue
Language: English
Button Options: Custom: Start Survey: "Start Survey!" Submit: "Submit"
Disable Browser "Back" Button: False

East Texas Area Health Education Center (AHEC) Experiential Best Practices

Page 1 - Heading

East Texas Area Health Education Center (AHEC) is collecting information on experiential practices for recruiting and retaining African-American and Hispanic students into careers in the health professions. You have been identified as an expert in this field so we are asking you to share your experiential practices with us. Information that you provide will be put into a searchable database for use by the Texas Higher Education Coordinating Board. If you have any questions please feel free to contact Dr. Amanda Scarbrough at amanda.scarbrough@utmb.edu or 409-772-7884.

Please complete this survey by Friday April 29th. Thank you for your participation. East Texas AHEC is making our communities healthier, and your efforts will not only change the face of recruiting and retaining minorities into careers in the health professions but will ultimately change the face of health care.

Page 1 - Question 1 - Name and Address (General) [Mandatory]

Please provide your name and contact information.

- Name
- Company
- Address 1
- Address 2
- City/Town
- State/Province
- Zip/Postal Code
- Country
- Email Address

Page 1 - Question 2 - Choice - Multiple Answers (Bullets) [Mandatory]

My program seeks to encourage minorities to go into the following: (Check all that apply)

- ❑ Allied Health
- ❑ Dentistry
- ❑ Medicine
- ❑ Nursing
- ❑ Pharmacy
- ❑ Public Health
- ❑ General Health Professions

Page 1 - Question 3 - Choice - Multiple Answers (Bullets) [Mandatory]

My program involves: (check all that apply)

- ❑ Academic Enhancement

- ❑ Science and/or Math Instruction
- ❑ Career Awareness and Motivation
- ❑ Mentoring
- ❑ Community Service
- ❑ Apprenticeship or Internships
- ❑ Reward Incentives (i.e. scholarships, admission preferences)
- ❑ Parent Involvement
- ❑ Teacher Involvement
- ❑ Counselor Involvement
- ❑ Other, please specify

....

Page 1 - Question 4 - Choice - Multiple Answers (Bullets) [Mandatory]

My program works with the following education level(s) (check all that apply):

- ❑ K-12
- ❑ Pre-Professional Undergraduate Education (programs such as Medical Assistant, Medication Aide, CNA, and Medical Coding)
- ❑ Professional Education (including 2 and 4 years)
- ❑ Graduate Post Bachelors (including Masters and PhD)
- ❑ Professional Post Bachelors (including programs such as NP, MD, DDS, and DPT)

Page 1 - Question 5 - Choice - Multiple Answers (Bullets) [Mandatory]

The method/s that best describe the way/ways that I evaluate my program are: (check all that apply)

- ❑ Formative (A type of evaluation which has the purpose of improving programs)
- ❑ Summative (Summarizes the development of learners at a particular time.)
- ❑ Process (A systematic method for collecting, analyzing, and using information to answer questions about programs - particularly about their effectiveness and efficiency
- ❑ Outcome (The purpose of an outcome evaluation is not only to measure changes in outcomes but to establish that the intervention caused the changes.)
- ❑ Economic (Assessment of the value of the program for money spent)
- ❑ Other, please specify

....

Page 1 - Question 6 - Choice - Multiple Answers (Bullets)

My program uses the following types of data collection methods (check all that apply)

- ❑ Application
- ❑ Survey
- ❑ Student Records
- ❑ Telephone Interviews
- ❑ Personal Interviews
- ❑ Observation
- ❑ Follow up Survey
- ❑ National Student Clearinghouse
- ❑ Other, please specify

....

Page 1 - Question 7 - Yes or No

Is your program evidenced based (based on previous research)?

❍ Yes
❍ No
❍ Additional Comment

Page 1 - Question 8 - Rating Scale - One Answer (Horizontal)

My practice can be shared. (To be shared means that it contains a curriculum that is transferable and generalizable to any population. It can be easily sustained, replicated and applied to meet the needs of a diverse population with different ethnic and cultural beliefs.)

Outcomes have not been verified	Strongly Disagree	Somewhat Disagree	Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	S
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 9 - Rating Scale - One Answer (Horizontal)

My program is appropriate. (My program contains age, ethnic and culturally appropriate interventions for the population it seeks to influence and is taught on the education level of the intended population).

Outcomes have not been verified	Strongly Disagree	Somewhat	Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly A
❍	❍	❍	❍	❍	❍	❍	❍

Page 1 - Question 10 - Rating Scale - One Answer (Horizontal)

My program is effective. (An effective program provides results that demonstrate it has effectively accomplished its intended goals for vested stakeholders including students, educators, funders and communities. Results can include qualitative or quantitative data as well as include personal narratives.)

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 11 - Rating Scale - One Answer (Horizontal)

My program can be improved (As the environment changes, my practice can be improved, enhanced or modified in order to successfully meet the new needs of the population it is serving).

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 12 - Rating Scale - One Answer (Horizontal)

My program has a positive outcome for the student. (My program increases the student's knowledge about healthcare career options, positively influences student's intent to pursue a career in healthcare, retains a student in healthcare program or graduates a student from a healthcare program.)

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 13 - Rating Scale - One Answer (Horizontal)

My program has a positive outcome for stakeholders. (My program has a positive outcome for those interested in recruiting and retaining minority students into careers in the health professions. It provides educators with good quality information to disseminate on health careers opportunities, gives interested healthcare professionals opportunities to mentor students, produces results for funders and improves community knowledge of health care career options for its residents. For the purpose of this evaluation stakeholders include communities, funders and all those involved in the education pipeline.)

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 14 - Rating Scale - One Answer (Horizontal)

My program is evldence based. (My program has a systematic process to evaluate the outcomes of the intervention. The evaluation methodology can be either based on theory or derived from previous academic or experiential examples of programs that have been proven to be successful in encouraging students to pursue healthcare careers. For the purposes of this evaluation a program that is evidence-based has been either formally (academic) or informally (programmatic) evaluated.)

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 15 - Rating Scale - One Answer (Horizontal)

My program creates a sense of ownership for students, communities and educators.

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 16 - Rating Scale - One Answer (Horizontal)

My program is efficient. (An efficient practice program is one that is dependable, comprehensive and useful for the stakeholders, which include: students, communities, funders and educators).

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 17 - Rating Scale - One Answer (Horizontal)

My program is cost effective. (A cost effectiveprogram has outcomes that are consistent with the expense to operate or provide the program. Further, based on current economic conditions, a cost-effective best practice is one that is economical and has an immediate or future financial or cost saving impact for stakeholders - students, communities, and educators. For the purposes of this study "economical" is defined as the tangible benefits produced compared to the money that has been invested in the program.)

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Stro
❍	❍	❍	❍	❍	❍	❍	

Page 1 - Question 18 - Open Ended - Comments Box

I feel that my program should be considered a best practice because....(please note that all answers are confidential and will be used for research purposes only).

....

....

....

....

Thank You Page

Thank your taking the Best Practices Assessment to help us learn more about your program as a best practice for encouraging minorities into health careers. If you have any questions about this survey or would like to know more about this study please contact Amanda Scarbrough at aewalters@utmb.edu for additional information.
<http://easttexasahec.org/>

Screen Out Page

Standard

Over Quota Page

Standard

Survey Closed Page

Thank for inquirying about the Best Practices Assessment in an effort to help us learn more about your program as a best practice for encouraging minorities into health careers. The assessment period has ended. For more information please contact Amanda Scarbrough at aewalters@utmb.edu for additional information.

Appendix C

Key Words

- Underrepresented Minorities
- Healthcare profession
- Medical School
- African American students
- Hispanic Students
- Health careers
- Minority students
- Public Health
- Dentistry
- Medicine
- Allied Health
- Nursing
- Enrichment programs
- Minority recruitment
- Minority retention
- Enrichment programs for minorities
- Dental pipeline
- Healthcare pipeline
- Dental school
- Recruiting minorities
- Retention of minorities
- Disadvantaged students
- Students of color
- Health sciences
- Biomedical
- Medical education
- Health education
- Healthcare work force
- Health careers summer camp
- Black students
- Latino students
- Minority faculty
- Mentoring strategies
- Pharmacy

Appendix D

East Texas Area Health Education Center (AHEC) Experiential Best Practices

East Texas Area Health Education Center (AHEC) Experiential Best Practices

East Texas Area Health Education Center (AHEC) is collecting information on experiential practices for recruiting and retaining African-American and Hispanic students into careers in the health professions. You have been identified as an expert in this field so we are asking you to share your experiential practices with us. Information that you provide will be put into a searchable database for use by the Texas Higher Education Coordinating Board. If you have any questions please feel free to contact Dr. Amanda Scarbrough at amanda.scarbrough@utmb.edu or 409-772-7884.

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Page 1 - Question 1 - Name and Address (General) [

Please provide your name and contact information.

- Name
- Company
- Address 1
- Address 2
- City/Town
- State/Province
- Zip/Postal Code
- Country
- Email Address

Page 1 - Question 2 - Choice - Multiple Answers (Bullets)]

My program seeks to encourage minorities to go into the following: (Check all that apply)

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- ❑ Dentistry
- ❑ Medicine
- ❑ Nursing
- ❑ Pharmacy
- ❑ Public Health
- ❑ General Health Professions

Page 1 - Question 3 - Choice - Multiple Answers (Bullets) []

My program involves: (check all that apply)

- ❑ Academic Enhancement
- ❑ Science and/or Math Instruction
- ❑ Career Awareness and Motivation
- ❑ Mentoring
- ❑ Community Service
- ❑ Apprenticeship or Internships
- ❑ Reward Incentives (i.e. scholarships, admission preferences)
- ❑ Parent Involvement
- ❑ Teacher Involvement
- ❑ Counselor Involvement
- ❑ Other, please specify

....

Page 1 - Question 4 - Choice - Multiple Answers (Bullets)]

My program works with the following education level(s) (check all that apply):

- ❑ K-12
- ❑ Pre-Professional Undergraduate Education (programs such as Medical Assistant, Medication Aide, CNA, and Medical Coding)
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- ❑ Graduate Post Bachelors (including Masters and PhD)
- ❑ Professional Post Bachelors (including programs such as NP, MD, DDS, and DPT)

Page 1 - Question 5 - Choice - Multiple Answers (Bullets)]

The method/s that best describe the way/ways that I evaluate my program are: (check all that apply)

- ❑ Formative (A type of evaluation which has the purpose of improving programs)
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- ❑ Outcome (The purpose of an outcome evaluation is not only to measure changes in outcomes but to establish that the intervention caused the changes.)
- ❑ Economic (Assessment of the value of the program for money spent)
- ❑ Other, please specify

....

Page 1 - Question 6 - Choice - Multiple Answers (Bullets)

My program uses the following types of data collection methods (check all that apply)

- ❑ Application
- ❑ Survey
- ❑ Student Records
- ❑ Telephone Interviews
- ❑ Personal Interviews
- ❑ Observation
- ❑ Follow up Survey
- ❑ National Student Clearinghouse
- ❑ Other, please specify

Page 1 - Question 7 - Yes or No

Is your program evidenced based (based on previous research)?

- Yes
- No
- Additional Comment

Page 1 - Question 8 - Rating Scale - One Answer (Horizontal)

My practice can be shared. (To be shared means that it contains a curriculum that is transferable and generalizable to any population. It can be easily sustained, replicated and applied to meet the needs of a diverse population with different ethnic and cultural beliefs.)

Outcomes have not been verified	Strongly Disagree	Somewhat Disagree	Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
❍	❍	❍	❍	❍	❍	❍	❍

Page 1 - Question 9 - Rating Scale - One Answer (Horizontal)

My program is appropriate. (My program contains age, ethnic and culturally appropriate interventions for the population it seeks to influence and is taught on the education level of the intended population).

Outcomes have not been verified	Strongly Disagree	Somewhat	Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
❍	❍	❍	❍	❍	❍	❍	❍

Page 1 - Question 10 - Rating Scale - One Answer (Horizontal)

My program is effective. (An effective program provides results that demonstrate it has effectively accomplished its intended goals for vested stakeholders including students, educators, funders and communities. Results can include qualitative or quantitative data as well as include personal narratives.)

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
❍	❍	❍	❍	❍	❍	❍	❍

Page 1 - Question 11 - Rating Scale - One Answer (Horizontal)

My program can be improved (As the environment changes, my practice can be improved, enhanced or modified in order to successfully meet the new needs of the population it is serving).

Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
❍	❍	❍	❍	❍	❍	❍	❍

Page 1 - Question 12 - Rating Scale - One Answer (Horizontal)

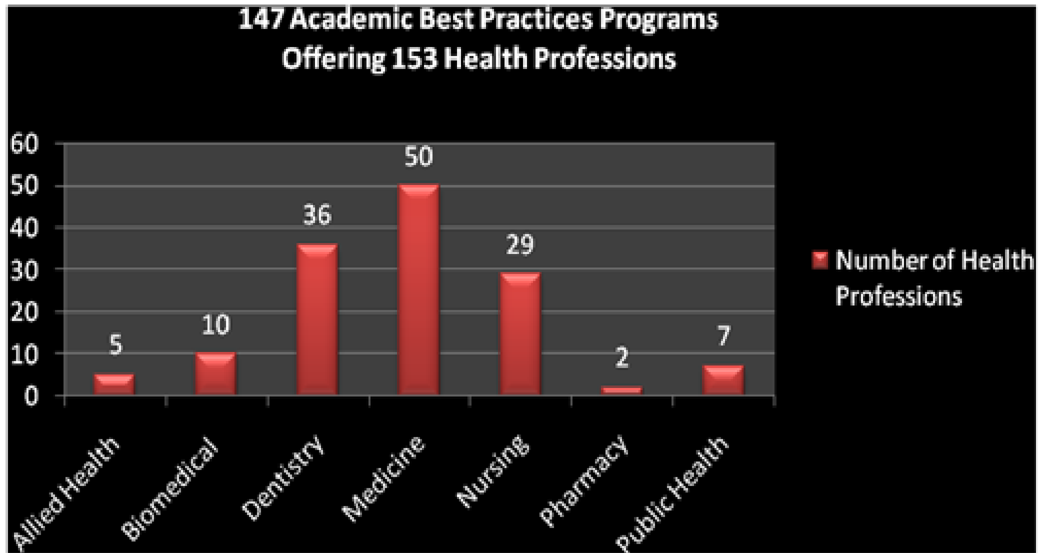
My program has a positive outcome for the student. (My program increases the student's knowledge about healthcare career options, positively influences student's intent to pursue a career in healthcare, retains a student in healthcare program or graduates a student from a healthcare program.)

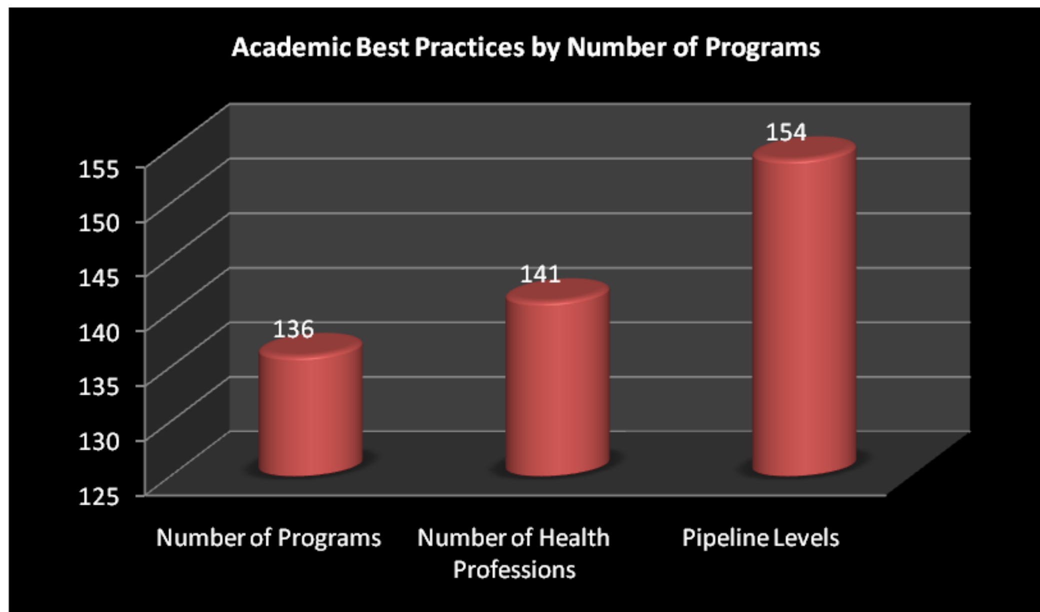
Results have not been verified	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
❍	❍	❍	❍	❍	❍	❍	❍

Appendix E

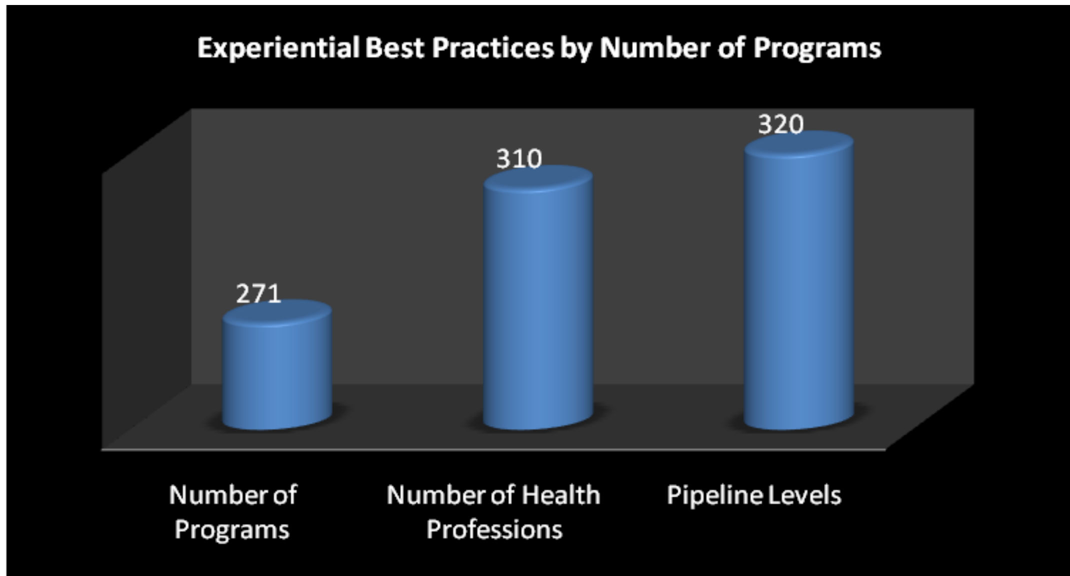
Accumulated Practice Examples

Published Practice Examples





Experiential Practice Examples



Appendix F

Database Codification System

Best Practices Searchable Database
Suggested Format

Search Criteria:

- State
- Discipline
- Pipeline level
- Academic or Experiential
- Keyword (s)
- Best Practice or Promising Best Practice

After the search is completed we would like the following to be displayed.

If Published:

- Program Name State Best Practice or Promising Best Practice (only if score was high enough, leave blank if score was low or not scored)
- Article Title, Year Published
- Discipline(s), Pipeline Level(s)
- Display Reference (see the display reference column on the spreadsheet)

If Experiential:

- Program Name State Best Practice or Promising Best Practice (only if score was high enough, leave blank if score was low or not scored)
- Program Description
- Disciplines(s), Pipeline Level(s)
- Display Website link (see the display website column on the spreadsheet)

We need a page that will allow individuals to submit new programs or ask for a program that is already in the database to be scored. We will request the following:

- Name
- Organization
- Address, City, State
- Email address, phone number
- Name of Program
- Discipline (s)
- Pipeline Level (s)
- Published or Experiential

Best Practices Searchable Database
Suggested Format Continued

- Submit Program Feature (allows individuals to upload Word and PDF documents or text for enter program description)
- Pay here Feature (possibly, not confirmed)
- Confirmation page with Submittal Number

We need a page that explains:

- The purpose of the database
- Scoring Methodology/Evaluation Methods
- Whom to Contact for additional information (Name, number, email address)

Appendix G

East Texas Area Health Education Center

Best Practice Scoring Packet #1

Instructions: To access the program to be scored click on the links below. If you are reviewing an experiential program you are not limited to the link provided. Please feel free to browse the website to look for additional information. If the link does not automatically open try pressing CTRL + clicking the URL or copying the link into your browser. You may receive a security warning stating the potential risk of downloading the PDF. We believe this is a standard security feature for Microsoft Office. Ninety-five percent of PDFs were obtained via PubMed or the University of Texas Medical Branch library and are virus free.

If you have a page number in parenthesis after the citation, enter the page number into your adobe acrobat tool bar. Some articles cover more than one program and we would like for you to only review one particular program. If you have difficulty accessing the websites or PDF documents please notify Regina Devers at rkdevers@utmb.edu or 409-772-7757

Experiential Programs

ID#: BPE167
Program Name: Health Careers Summer Institute: Upstate AHEC
Website: http://www.upstateahec.org/student-services/health-careers-programs/health-careers-summer-institute/

ID#: BPE198
Program Name: Toxicology Training Program at The University of Texas at Austin and the University of Texas MD Anderson Cancer Center-Science Park Research Division
Website: http://www.utexas.edu/pharmacy/divisions/pharmtox/toxicology/ttg/

ID#: BPE35
Program Name: Minority Access to Research Careers (MARC)
Website: http://port.bio.uci.edu/MARC/default.htm

Published Programs

ID#: BPA92
Program Name: The Graduate Education Accelerated Routes for Underserved Persons (GEAR-UP)
Article Title: Changing the Face of Nursing Faculty: Minority Faculty Recruitment and Retention
Website: http://www.utmb.edu/ahecdoc/Program%20Office/Prog%201%20-%20HC%20Promotions/BEST%20PRACTICES/Research/BP%20Examples/Nursing/Stanley.pdf

ID#: BPA82
Program Name: University of Toledo College of Medicine: Student National Medical Association (SNMA)
Article Title: Recruitment of Underrepresented Minority Students to Medical School: Minority Medical Student Organizations, an Untapped Resource
Website: http://www.utmb.edu/ahecdoc/Program%20Office/Prog%201%20-%20HC%20Promotions/BEST%20PRACTICES/Research/BP%20Examples/Medicine/Rumala.pdf

ID#: BPA30
Program Name: Community-Based Dental Education program (An Assessment of all 15 schools)
Article Title: Practice Plans of Dental School Graduating Seniors: Effects of the Pipeline Program
Website: http://www.utmb.edu/ahecdoc/Program%20Office/Prog%201%20-%20HC%20Promotions/BEST%20PRACTICES/Research/BP%20Examples/Dentisitry/Davidson.pdf

Please input scores at http://www.zoomerang.com/Survey/WEB22CHWWYTRR6/ Due by August 1, 2011
Thank you for participating in the review process for Best Practices for recruiting and retaining African-American and Hispanic students into careers in the health professions.

Appendix H

Scoring and ranking of randomly selected "all programs"

Program Identifier	Program Name	Average	Practice is…
BPA79	Duke biomedical engineering (BME) program	86	Best Practice
BPA82	University of Toledo College of Medicine: Student National Medical Association (SNMA)	83	Best Practice
BPA18	Bakersfield College, Central Valley Nursing Program	81	Best Practice
BPE35	Minority Access to Research Careers (MARC)	80	Best Practice
BPA59	University of Illinois at Chicago (UIC) Bridges program	79	Promising
BPA24	Community-Based Dental Education program	77	Promising
BPE131	UMDNJ – New Jersey Medical and New Jersey Dental Schools, Newark, N.J.(Summer Medical and Dental Education Program/SMDEP	76	Promising
BPA61	Mount Sinai School of Medicine: The Summer Enrichment Program (SEP)	75	Promising
BPE167	Health Careers Summer Institute: Upstate AHEC	75	Promising

BPE198	Toxicology Training Program at The University of Texas at Austin and the University of Texas MD Anderson Cancer Center-Science Park Research Division	75	Promising
BPE186	Joint Admission Medical Program (JAMP)	74	Promising
BPE27	UCSF: Fresno State - Health Careers Opportunity Program (HCOP)	69	Promising
BPA30	Community-Based Dental Education program (An Assessment of all 15 schools)	68	Promising
BPA73	University of Rhode Island ''Health Professions in Geriatrics'' program	65	Promising
BPE93	The IU Simon Cancer Center Summer Research Program (SRP), Indiana University	65	Promising
BPA92	The Graduate Education Accelerated Routes for Underserved Persons (GEAR-UP)	64	Promising
BPE194	STARS for Nursing project, University of Texas at Arlington (UTA) School of Nursing		Did not Meet Standardized Definition
BPE128	NHLBI Summer Student Research		Did not Meet Standardized Definition

Scoring and ranking of randomly selected "Texas Only"

Program Identifier	Program Name	Average	Practice is…
BPA215	Promoting minority student learning gains in a prescription practice course	86	Best Practice
BPA4	The Role of Enrichment Programs in Strengthening the Academic Pipeline to Dental Education	85.5	Best Practice
BPE188	Minority Biomedical Research Support (MBRS) programs: The University of Texas at San Antonio	84	Best Practice
BPE192	Score Program at the University of Texas at El Paso	68.5	Promising
BPE18	Hispanic Center of Excellence: University of Texas Medical Branch at Galveston		Did not Meet Standardized Definition
BPE180	Health Careers Opportunity Program (HCOP): Prairie View A&M University		Did not Meet Standardized Definition