



DEFENSE CENTERS
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For Psychological Health
& Traumatic Brain Injury

Collecting, Analyzing and Interpreting Qualitative Data

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Webinar Details

- This webinar presentation has been pre-recorded
- A live question-and-answer session will be held at the conclusion of the presentation
- Questions may be submitted via the “Question” pod
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Continuing Education Details

- Continuing education credit is not available for this event
- Sources for materials and additional training information:
 - Materials from this series are available at:
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Presenters

CAPT Armen Thoumaian, Ph.D.
U.S. Public Health Service
Acting Deputy Chief of Integration
Office of Policy, Programs and Integration, DCoE

CAPT Armen Thoumaian is a scientist director in the Commissioned Corps of the U.S. Public Health Service with more than 30 years experience in health and mental health program design and evaluation.

In January 2012, CAPT Thoumaian joined the staff at the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) to help design and implement program evaluation and improvement efforts in the Defense Department.

He holds a B.A. in Psychology and Sociology, an M.A. in General Experimental Psychology, and a Ph.D. in Social Welfare and Social Work, completing an National Institute of Mental Health fellowship in Community Mental Health.



USPHS Capt. Armen Thoumaian, Ph.D.

Presenters

Destiny Simone Ramjohn, Ph.D.
Research Scientist, Contract Support for DCoE

Dr. Destiny Simone Ramjohn is a medical sociologist and qualitative researcher with over seven years of program evaluation experience. She has worked extensively to examine the contextual and situational factors associated with health behaviors and methodological challenges in intervention research in domestic and international communities. Dr. Ramjohn has served as a consultant with the Defense Department, Centers for Disease Control and Prevention, New York State Health Foundation and The Commonwealth Fund. She has taught numerous courses on employing qualitative methods within public health evaluation, education and practice. Dr. Ramjohn earned her doctorate in Sociomedical Sciences from Columbia University.



Dr. Destiny Simone Ramjohn

Debra Stark, M.B.A.
Research Scientist, Contract Support for DCoE

Ms. Debra Stark is a survey methodologist with 15-plus years of research experience. Her work includes program evaluation and monitoring, qualitative data analysis and survey instrument design. She has worked on public health services evaluation projects with various federal agencies, including the Department of Veterans Affairs and TRICARE Management Activity. Ms. Stark received an M.B.A. from Vanderbilt University.



Ms. Debra Stark

Moderator and Presenter

Aaron Sawyer, Ph.D.

Research Scientist, Contract Support for DCoE

Dr. Aaron Sawyer is a clinical psychologist with extensive expertise in intervention outcome research and program evaluation. He has delivered child, family and adult interventions for more than a decade, including specialization in trauma and experience working with military families. Dr. Sawyer holds an M.S. in Experimental Psychology and a Ph.D. in Clinical Psychology. He completed post-doctoral training at The Kennedy Krieger Institute/Johns Hopkins University and is a licensed psychologist.



Dr. Aaron Sawyer

Patrick High, Dr.P.H.

Epidemiologist, Contract Support for DCoE

Dr. Patrick High is an epidemiologist with over a decade of experience and has expertise in survey design, research methodology and program evaluation. His experience includes supporting the Office of the Undersecretary of Defense for Personnel and Readiness, Operations Research and Safety, and the Defense Suicide Prevention Office as an epidemiologist. Dr. High holds the degree of doctor of public health with specialization in Epidemiology and Biostatistics from the Uniformed Services University of the Health Sciences. He previously spent nine years in the Illinois Army National Guard.



Dr. Patrick High

Overview and Objectives

- This training presentation will provide an introduction to collecting, coding, analyzing and understanding qualitative data. Qualitative data include information derived from interviews, observation, focus groups and written feedback or comments.
- At the conclusion of this webinar, participants will be able to:
 - Explain how qualitative data can be used in support of program evaluation and improvement efforts
 - Demonstrate knowledge of important considerations for collecting and coding qualitative data
 - Implement suggested guidance to begin analyzing qualitative data and integrating with quantitative data
 - Identify common challenges that programs face when using qualitative data and also identify resources for technical support

Agenda

- Introduction to Qualitative Methods
- Collecting Qualitative Data
- Analyzing and Interpreting Qualitative Data
- Reporting Qualitative Data
- Common Challenges
- Conclusion
- Resources and References
- Feedback and Q&A Session

Introduction to Qualitative Methods

What Counts in Program Evaluation?



“Not everything that can be counted counts, and not everything that counts can be counted.”

-William Bruce Cameron

What Are Qualitative Methods?

- Qualitative methods are forms of data collection and analysis based on textual or non-numerical information
- You are likely already engaged in qualitative methods:
 - Logic model development
 - Notes about program participants
 - Meeting minutes
 - Staff feedback



Advantages of Qualitative Methods

Qualitative methods have distinct advantages for:

- Understanding meaning
- Understanding context
- Understanding process
- Identifying unknown or unanticipated phenomena
- Developing causal explanations (Patton, 2001)

Example: How Can Qualitative Methods Add to My Program Evaluation?

- A new program manager is interested in finding out how to improve a program due to declining participation rates and poor satisfaction ratings from participants (78% report they are “dissatisfied” or “very dissatisfied”)
- Qualitative methods can be used to explore:
 - Why are program participants dissatisfied?
 - What are the barriers to program participation?
 - How do participants think the program’s services can be improved?

Key Differences Between Qualitative and Quantitative Methods

Qualitative	Quantitative
Data are more specific to participants	Data can often be applied to broader population
Answers: Why? How?	Answers: How many? Who? When? Where?
Data are generally text-based	Data are generally number-based
Data collection and analysis are generally time-intensive	Data collection and analysis are generally efficient
Data collection tools are flexible	Data collection tools are fixed

Establishing Validity in Qualitative Methods

Term	Definition	Evaluation Tactic
Credibility	Extent to which data fit views of the participants or whether the findings hold true	Check interpretations with participants
Transferability	Extent to which findings are applicable to other populations and settings	Provide information about participants to readers
Dependability	Extent to which data collection and analysis processes are logical and repeatable	Document all processes and explain basis for them
Confirmability	Extent to which data support the findings	Use multiple evaluators and examine potential biases

No Single Method Is Superior

- Just as no single treatment/program design can solve complex social problems, no single evaluation method can fully explain a program
- Qualitative evaluation methods provide a more complete picture than quantitative methods alone, especially with regard to program processes and participant experiences
- Qualitative methods help us understand the richness and complexity of psychological health and traumatic brain injury programs

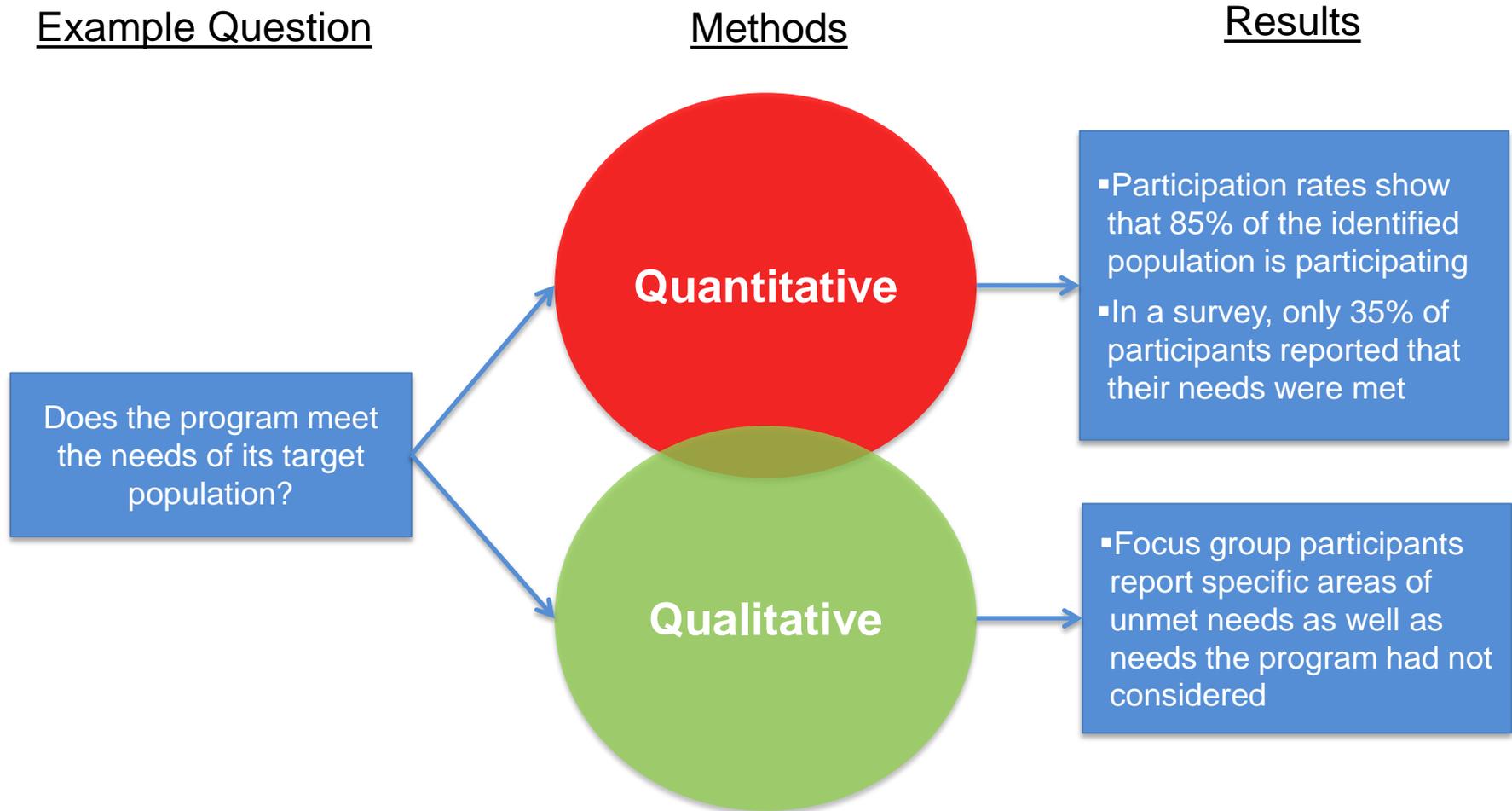
Mixed Methods Can Produce More Complete Findings

Mixed methods combine the benefits of both qualitative and quantitative methods and can:

- Assess size and frequency and explore meaning and understanding
- Answer multiple evaluation questions using tailored methods (e.g., focus groups and statistical analyses)



Mixed Methods Can Produce More Complete Findings (continued)



Sample Mixed Method Designs

- **Parallel** – Designs in which quantitative and qualitative data are gathered at the same time and results are merged
- **Sequential** – Designs in which one data set builds on another
- **Embedded/Nested** – One design incorporates aspects of the other design (e.g., a rating form that includes open-ended questions)



Collecting Qualitative Data

Choose Data Collection Methods Based on Evaluation Questions

- Select qualitative data collection methods based on the specific question(s) to be addressed
- Evaluations often contain multiple questions of interest (e.g., satisfaction, barriers, quality of implementation)
- Be sure to keep evaluation questions simple and focused
- Note that data collection may lead to additional evaluation questions as new information is gained

Ethics and Confidentiality

Inform participants of the potential risks of participation

Clearly state to participants:

- How data will be collected (e.g., recordings, written)
- Who will participate (e.g., rank, job roles)
- Who will have access to data
- How confidentiality will be maintained
- How data will be stored/destroyed



Qualitative Data Collection Methods

TITLE	DESCRIPTION	CHARACTERISTICS
Focus Groups	Group conversation facilitated by moderator	Use structured protocol, groupings of similar individuals
Interviews	One-on-one conversation	Can be structured or semi-structured
Open-ended Comments	Free-text response on feedback forms or surveys	Voluntary expression
Observation	Log or description of activity	Applied in consistent manner to minimize bias
After Action Reviews (AARs)	Group review following activity	Focus on strengths and opportunities for improvement
Case Studies	In-depth observations over time	Study of one individual, process or program

Focus Groups

- Moderator
- 6-10 participants
- Discussion guide
- Meeting room
- Recording method



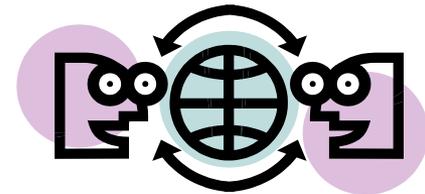
Requires an atmosphere structured to encourage interactive discussion

- Safe and permissive -
- Preserves integrity and dignity -

The discussion is the data

Interviews

- Most appropriate when you need in-depth information from an individual very familiar with the topic
- Work well for sensitive or complex issues
- Similar to focus groups, interviews use structured or semi-structured discussion guide
- Call for flexible, active guidance on the part of the interviewer, since there is no group dynamic



Open-Ended Comments

- Often found on feedback forms or open-ended survey questions
- Voluntary nature of data make them more compelling
- May not get information on topic of interest
- May not get a range of opinions



Observation

- Best when there is a need to understand behavior in context (i.e., How people actually behave in realistic settings)
- Does not rely on attitudes and self-report
- Often uses a checklist to ensure uniform data collection
- May be difficult to collect quotes
- The act of observation can influence the behavior of those being observed



After Action Reviews

Post-activity hotwash:

- Group meets to discuss impressions of how activity actually occurred in real-time
- Summarize and discuss most important points
- Generally focused on strengths and weaknesses
- Often time-limited/constrained
- Meeting notes serve as basis for reports/analysis



Case Studies

- Examine what happens to a person or group over the course of time
- Allow for in-depth, detailed account of important experiences of a specific person
- Generally portray the story of someone who represents the population



Analyzing and Interpreting Qualitative Data



Digging for Riches in the Data

Qualitative evaluation findings provide rich information by:

- Illuminating stories behind the numbers
- Producing in-depth information difficult to extract through quantitative methods
- Yielding explanations for unexpected findings from quantitative studies
- Suggesting additional questions for quantitative evaluation



The Qualitative Data Analysis Process

Organize

- Read and interpret data
- Develop initial coding themes



Reduce

- Create a codebook
- Apply codes to data
- Check reliability



Describe

- Create visual display
- Communicate results



Organize: Read and Interpret Data

- Read the data to explore the range, depth, and diversity of information collected
- Interpreting is the ability to think abstractly, see patterns in the data
- There are multiple ways to “read” the data:
 - **Literal reading** – focuses on actual content as-recorded, including grammar, structure, and content
 - **Interpretive reading** – makes sense of participant statements
 - **Reflexive reading** – examines the evaluator’s role in collecting the information

Organize: Develop Initial Coding Themes

- A code is simply a way of classifying data into meaningful, relevant categories
- Take notes to form the foundation for your analysis including:
 - Mental notes to pursue an issue further
 - Thoughts about what a participant was “really” saying
 - Hypotheses that might explain a puzzling observation

Keep the purpose of your codes in mind → codes should always be guided by your evaluation questions!

Reduce: Create a Codebook

- A codebook maps the relationship between the raw data, themes and key questions guiding your evaluation
- Codebooks should include code names or labels, definitions, and inclusion and exclusion criteria:
 - Description of when to use a code
 - Description of when NOT to use a code
 - Examples of correct application of a code

Example Codebook Entry

Code Name	Code Definition	Inclusion	Exclusion	Example Text
Stigma	Service member descriptions of the stigma that exists in the Military Health System	Apply to all instances of seeking help for mental health	Do not apply for civilian health system	“I’m afraid I might lose my security clearance if I seek help.”
Positive experiences	Service member descriptions of their prior positive experiences with health care providers	Apply to favorable experiences specific to health care	Do not apply to negative experiences or non-health care	“I know my doc is gonna take good care of me.”
Negative experiences	Service member descriptions of their prior negative experiences with health care providers	Apply to unfavorable experiences specific to health care	Do not apply to positive experiences or non-health care	“I trusted my doc and then he ratted me out to my CO [commanding officer].”

Reduce: Apply Codes to Data

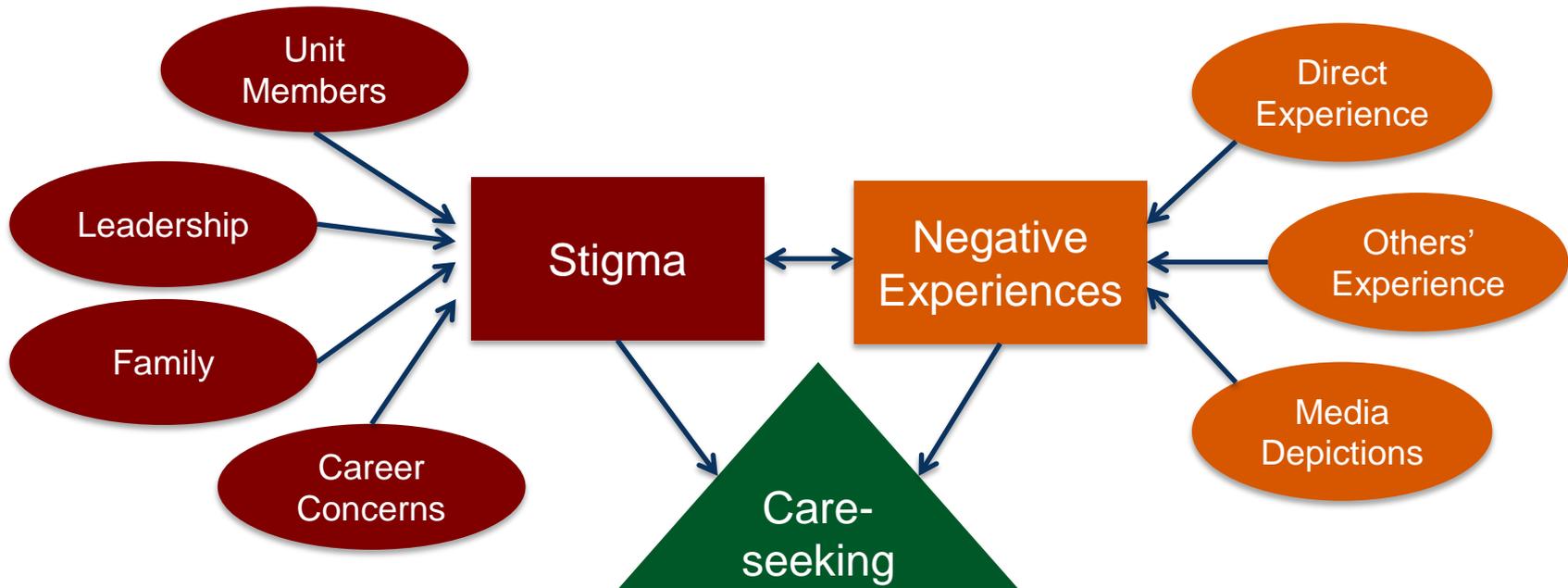
- Apply codes to data by reading and re-reading data until no new themes emerge
- Codes may be refined, expanded or eliminated throughout this process
- Clarify contrasts and comparisons
 - New patterns may emerge in the data, even at the latest stage
- Establish credibility by linking data to codes
 - Document quotes from multiple participants that support the evaluator's interpretations

Reduce: Check Reliability

- Inter-coder agreement is the extent to which independent coders evaluate data (e.g., blocks of text) and reach the same conclusion
- Ideally, two or more people code the data and compare how they applied codes:
 - Do two coders working separately agree on the definitions?
 - Do they apply the codes in the same way?

Describe: Create a Visual Display

When appropriate, use diagrams to show how something works or to clarify relationships between parts of a whole



For example, a network diagram shows links between categories, variables or events over time

Describe: Communicate Results

- Keep in mind your audience may be unfamiliar with qualitative methods
- Clearly describe:
 - Participant recruitment
 - Participant characteristics
 - Data collection and analysis procedures
 - Reasoning behind conclusions
- Be mindful of confidentiality as the sources of qualitative data are often easier to identify than numerical data

Reporting Qualitative Data

Purpose of Reporting



- Demonstrate importance and benefits of the program
- Provide accountability to funding sources and other stakeholders
- Generate additional support and buy-in for the program
- Inform stakeholders about plans to improve quality and outcomes

Reporting Qualitative Data

When presenting the results of evaluations, it is important to remember both qualitative and quantitative data and findings are typically reported together:

- Present data using graphs, tables, diagrams and key quotes
- Interpret findings and draw conclusions
- Support all conclusions with evidence through clear, consistent use of data (e.g., numbers, quotes)
- Identify implications for policy and practice



Budget Example: Integrating Quantitative and Qualitative Information

Category	Budgeted	Awarded/ Funded	Spent
Staff	\$733,696	\$733,696	\$707,472
Supplies	\$0	\$0	\$0

An interview with program administrator revealed:

- Program spent less money on staff because staff member left and replaced by more junior individual at lower cost
- Program does not budget for supplies because it competes for end-of-year funds (e.g., surplus money) to provide supplies

Program Intent Example: Integrating Quantitative and Qualitative Information

- Evaluation Question: Are staff and stakeholders aware of the program's mission, goals and objectives?
- Program manager gave a 'Yes' response on checklist
- Qualitative methods revealed additional information:
 - Interviews conducted with stakeholders indicated that not all stakeholders were aware of the program's mission and goals
 - A focus group conducted with program staff indicated that not all staff were aware of the program's specific goals

Sample Format for Written Report

- Executive Summary
- Program Overview
 - Mission, goals and objectives
 - Inputs and activities
 - Outputs and outcomes
- Program Evaluation Methods
- Results and Conclusions
- References
- Appendices



Common Challenges

Special Considerations for Conducting Analyses of Military Programs

- Service members may not be forthcoming in groups that include individuals with higher rank
- Special care must be taken to protect participant confidentiality given common concerns related to career trajectories and discrimination
- It may be difficult to secure volunteers to participate in qualitative data collection activities due to time constraints
- Stakeholders are likely to be unfamiliar with qualitative methods and to have biases against their use (e.g., these methods do not offer added value)



Image Source: California National Guard

Threats to Validity

It is especially important when using qualitative methods to use practices that maximize data validity:

- Select participants representative of population
- Focus on common themes over infrequent responses
- Express data in participants' words
- Document data collection and analysis procedures
- Check interpretations with participants
- If possible, compare interpretations across multiple evaluators

Common Challenges FAQ

- My staff lack the resources, such as time, training and materials to collect and analyze qualitative data.
- How do I handle intense emotional responses that may occur during qualitative data collection?
- How can I use qualitative methods to improve my program?

My Staff Lack the Resources, Such as Time, Training and Materials, to Collect and Analyze Qualitative Data

- Program evaluation, whether carried out through qualitative and/or quantitative methods, is an important investment in a program's future
- Qualitative methods do not need to be overly complex or time-consuming to be of benefit (e.g., comment cards, annual focus groups, observation)
- Over time, program evaluation results may be used to identify critical processes and eliminate or streamline others
- Many materials and training opportunities are free or low-cost, and consultation may be readily available from colleagues or researchers

How Do I Handle Intense Emotional Responses That May Occur During Qualitative Data Collection?

- Staff involved in the data collection processes may encounter statements about:
 - Medical, psychological health, traumatic brain injury issues
 - Suicidal/homicidal thoughts, sadness, anger, intense frustration
 - Child or spousal abuse, relationship problems
- Develop standard operating procedures based on applicable regulations for how to handle concerning statements including:
 - If/when confidentiality may be broken
 - How to proceed in an emergency situation
 - When and to whom reports of concerns should be made
 - Referral resources for participants and procedures for distribution

How Can I Use Qualitative Methods to Improve My Program?

- Qualitative methods may be used to:
 - Understand participants' experiences with staff and services
 - Improve fit between program and its context or population
 - Overcome barriers to participation, low satisfaction, poor results
 - Gather feedback from staff and stakeholders about potential improvements

- Real-life examples in military programs:
 - Provision of services by unit-embedded providers to enhance program participation
 - Modifications of program language to reduce stigma (e.g., customer vs. patient)
 - Identification of unintended barriers to future help-seeking resulting from programs focused on improving resilience

Conclusion

Key Takeaways

- ★ Qualitative data can provide a rich source of information about how a program operates and how it affects participants
- ★ Qualitative and quantitative data are complementary in that they both have unique strengths
- ★ Qualitative data are especially useful in designing program improvements



Photo by: Stewart Leiwakabessy

Resources

DCoE Program Evaluation Guide:

http://www.dcoe.mil/Content/Navigation/Documents/DCoE_Program_Evaluation_Guide.pdf

U.S. Army Public Health Command, Behavioral and Social Health Outcomes Program (BSHOP):

<http://phc.amedd.army.mil/topics/healthsurv/bhe/Pages/BehavioralandSocialHealthOutcomesProgram%28BSHOP%29Services.aspx>

Medicine Sans Frontiers (Doctors Without Borders):

<http://fieldresearch.msf.org/msf/bitstream/10144/84230/1/Qualitative%20research%20methodology.pdf>

Qual Page, University of Georgia:

<http://www.qualitativeresearch.uga.edu/QualPage/index.html>

University of Kentucky – Extension:

<http://www2.ca.uky.edu/AgPSD/Focus.pdf>

Michigan Public Health Training Center:

<http://miphtcdev.web.itd.umich.edu/trainings/courses/community-based-participatory-research-partnership-approach-public-health-downloadable>

Resources (continued)

Centers for Disease Control and Prevention:

<http://www.cdc.gov/eval/index.htm>

National Network of Libraries of Medicine:

<http://nnlm.gov/evaluation/guides.html>

The Community Tool Box, University of Kansas:

<http://ctb.ku.edu/en>

Minnesota Department of Health:

<http://www.health.state.mn.us/divs/opi/qi/toolbox>

Deployment Health Clinical Center:

http://www.pdhealth.mil/clinicians/assessment_tools.asp

Defense and Veterans Brain Injury Center:

[http://dvbic.dcoe.mil/diagnosis-assessment?audience\[0\]=3](http://dvbic.dcoe.mil/diagnosis-assessment?audience[0]=3)

National Center for Telehealth and Technology:

<http://www.t2.health.mil/>

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