Rapid Qualitative and Integrated Mixed Methods in Implementation Research

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2/6/2023

UW BIRCH Methods Core Workshop

Agenda – Morning

8:00 – 8:15	Welcome, Logistics, and Introduction to Methods Core and Alison Hamilton
8:15 – 9:20	Rapid turn-around qualitative methods: overview, considerations, planning for data collection and analysis
9:20 – 9:30	*Break*
9:30 – 10:50	Rapid analysis: steps, considerations, tips
10:50 - 11:00	*Break*
11:00 – 12:20	Beyond rapid analysis: shifting to other qualitative analytic tools

Agenda – Afternoon

12:20 – 1:30	*Lunch*
1:30 – 2:50	Integrating mixed methods in implementation research: design options, rationales, decision points, visual tools
2:50 – 3:00	*Break*
3:00 – 4:00	Integrating mixed methods in implementation research: sampling and data collection considerations, analytic options, presenting results

Logistics

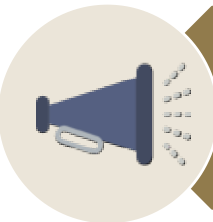
- This meeting is being recorded
- There will be designated times for Q&A during the workshop. If you have questions outside of those times, please write them in the chat box.
- Please fill out the evaluation following this workshop to help improve our services.

BIRCH University of Washington Behavioral Research Center for HIV

The UW Behavioral Research Center for HIV (BIRCH) is a developmental center funded by the National Institute of Mental Health (NIMH), providing infrastructure and support for high-impact science on HIV and mental health by offering technical assistance, training, pilot funding, and mentorship to the next generation of HIV researchers.

The Center aims to:

Catalyze HIV research, with a focus on integrating care for mental disorders into HIV prevention and treatment strategies.



Support and apply the science of dissemination and implementation.

Methods Core

Director:	Brian Flaherty, PhD
Associate Director:	Gary Chan, PhD
Core Faculty:	David Huh, PhD
	Chongzhi Di, PhD
	Bryan Weiner, PhD
Senior Advisors:	Sarah Holte, PhD

UW BIRCH Methods Core

Services Offered

- Monthly JIG-Quant meetings
- Methods Consultations
- Methods Workshops and Seminars
- Pilot award funding

To sign up for consultations or to become a BIRCH member, visit our website at uwbirch.org

BIRCH

Alison Hamilton, PhD, MPH

Dr. Alison Hamilton is a medical anthropologist and implementation scientist. She is a Research Career Scientist and Chief Officer of Implementation and Policy at the VA Center for the Study of Healthcare Innovation, Implementation & Policy at the Greater Los Angeles Healthcare System, and a Professor-in-Residence in the Department of Psychiatry and Biobehavioral Sciences at UCLA.

Rapid Qualitative and Integrated Mixed Methods in Implementation Research Workshop

February 6, 2023

Alison B. Hamilton, PhD, MPH

University of Washington
Behavioral Research Center for HIV

Workshop Outline

Morning

- Rapid analysis overview
- Rapid analysis steps
- Next steps after rapid analysis

Afternoon

- MM design options, rationales
- Sampling, considerations, results

Guiding question

How can we conduct qualitative research in compelling, rigorous, efficient, and impactful ways?

- Facilitate utility of research findings
- Translate findings into practice
- "Researchers should strive to demonstrate how the data are meaningful, appeal to various audiences, and engage stakeholders in the relevance of the research." (Chandler et al., 2015)

Chandler, R., Anstey, E., & Ross, H. (2015). Listening to voices and visualizing data in qualitative research: Hypermodal dissemination possibilities. SAGE Open, 5(2), 2158244015592166.

Rapid techniques:
critical review (Vindrola-Padros & Johnson, 2020)

Reviewed 18 articles and found six primary reasons for rapid techniques:

1. reduce time
2. reduce cost
3. increase the amount of collected data
4. improve efficiency
5. improve accuracy
6. obtain a closer approximation to the narrated realities of research participants

Vindrola-Padros C, Johnson GA. Rapid Techniques in Qualitative Research: A Critical Review of the Literature. Qualitative Health Research. 2020 Aug;30(10):1596-604.

What is unique about rapid qualitative research?

- Approach is “telescoped” and often action- or crisis-oriented
- There’s a pragmatic need for qualitative data
- Typically and preferably conducted by teams
- Typically need to draw data quickly from multiple sources; often triangulate with quantitative data
- Potentially less time to critique, reflect, synthesize

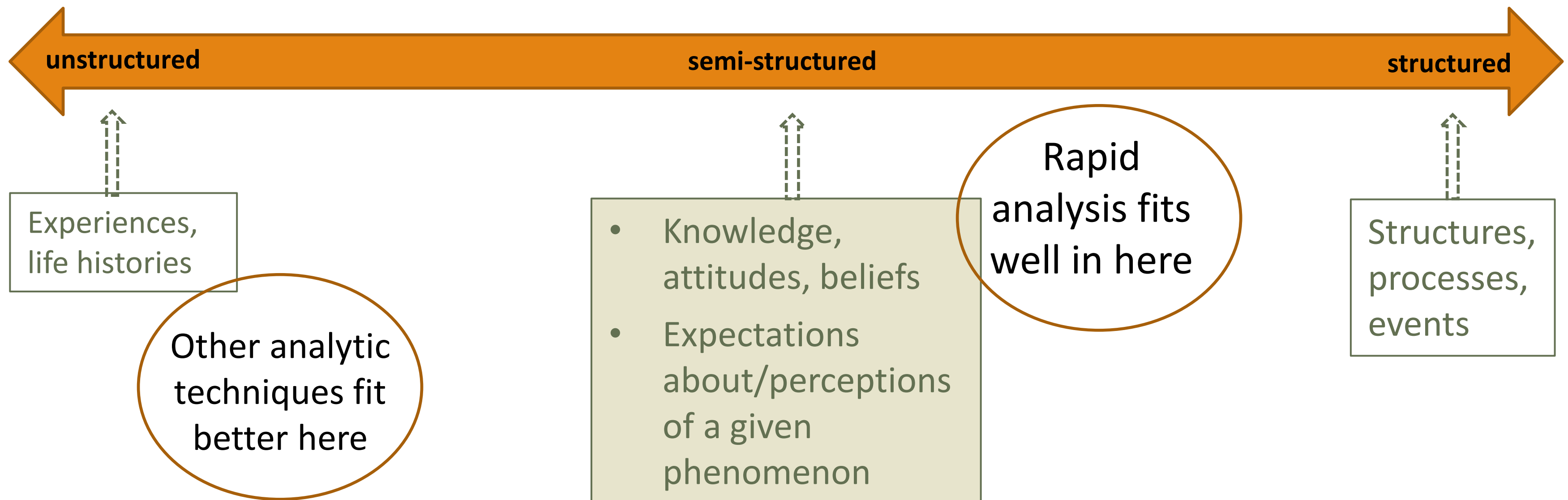
Review of rapid approach

- First taught at QRSI 2012 (10-year anniversary!)
- Presented on national VA cyberseminar in 2013
- Part of the Sort & Sift, Think & Shift method (Maietta et al., 2021)
  - Draws on **episode profiles**
- Recommended for **semi-structured data collection methods** (*not unstructured methods*)
  - Individual, dyadic, focus group interviews
  - **Clear topic/domain of inquiry for each interview question**
    - Might be mapped to a conceptual/theoretical model with specified constructs
  - Consistent and rigorous approach to data collection

Maietta R, Mihas P, Swartout K, Petruzzelli J, Hamilton AB. Sort and Sift, Think and Shift: Let the Data Be Your Guide An Applied Approach to Working With, Learning From, and Privileging Qualitative Data. Qualitative Report. 2021 Jun 1;26(6).

Choosing your qualitative methods

What are your research questions? What type of work do you want to do?



Your analytic options are shaped by your methods choices.

For rapid, consider incorporating some structure into your semi-structured data collection.

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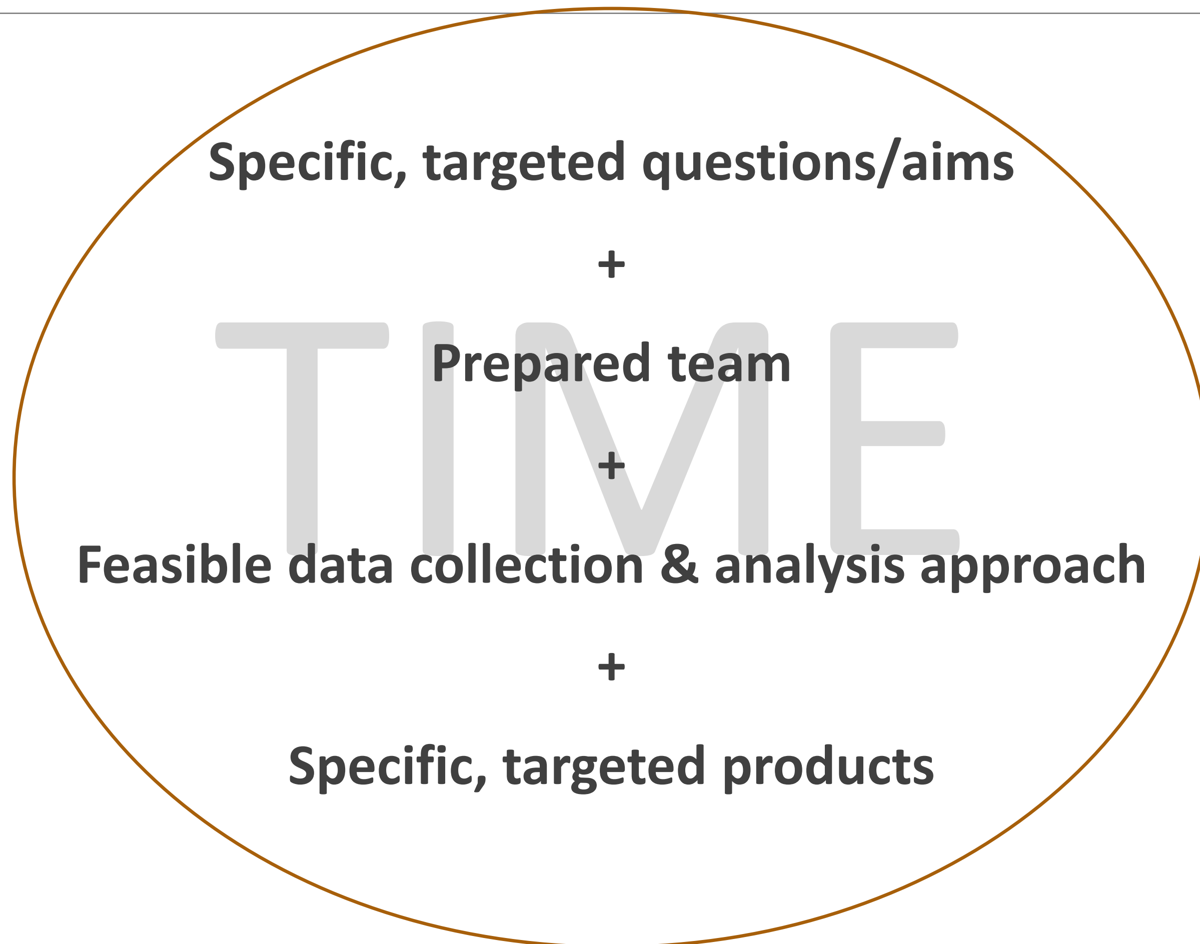
Key ingredients for a rapid approach



Why templated summaries?

- Driving question: **what's in your data**?
  - creating an **inventory** of data contents
  - *"condensing"* data (condensing="selecting, focusing, simplifying, abstracting, and/or transforming the data" [Miles, Huberman, Saldana, 2019])
- "Sketch" of the data collection episode

➢ ***Intent is to enhance accessibility to what's in the data***
- Use line numbers from transcripts, create a "table of contents"
- Write memos about content
- Inform additional analytic approaches

Miles MB, Huberman AM, Saldana J. Qualitative Data Analysis: A Sourcebook (4th ed). SAGE, 2019.

Review of rapid approach

- Summarize each data collection episode (e.g., interview) using a template of domains
  - Emphasis on **verticality** of individual data collection episodes
- Create matrices from summaries
  - Emphasis on **horizontality** across multiple data collection episodes
- Review summaries and matrices to identify key points, potential themes, quality and consistency of data collection, directions for further data collection and analysis, etc…
- Continue analyzing data as needed for different products and goals

For step-by-step guidance:
https://www.youtube.com/watch?v=zXRpWg-2HEA

Rapid data analysis: some considerations

- Rapid analysis may need to be supported by individuals with limited/no qualitative methods background
- Data analysis is driven by a multifaceted approach
- Rapid data analysis necessitates use of several different qualitative analysis tools
- Data consolidation/condensation is needed to turn *preliminary* analyses around quickly
- ***Rapid data analysis does not and should not preclude other types of engagement with your data!***

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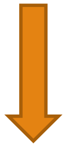
Conceptualizations of data reduction/condensation

- "data reduction, also known as data transformation, occurs at all points in a study from design through to data collection and write-up. It is not something separate from analysis, it is analysis: analysis of a form which sharpens, sorts, focuses, throws away, organizes and clarifies data in such a way that final analysis can occur coherently" (Huberman & Miles 1983)



- "We stay away from data "reduction" as a term because that implies we're weakening or losing something in the process." (Miles, Huberman, Saldana, 2019, p.8)

Huberman AM, Miles MB. Drawing valid meaning from qualitative data: Some techniques of data reduction and display. Quality & Quantity. 1983 Aug 1;17(4):281-339.

Miles MB, Huberman AM, Saldana J. Qualitative Data Analysis: A Sourcebook (4th ed). SAGE, 2019.

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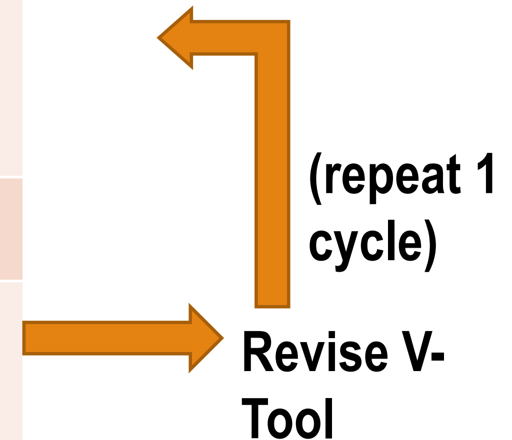
Example: Screening and Referring Women Veterans for Homelessness Vulnerability
(RRP 11-421, Washington & Hamilton)

Timeframe: one year
Question: how can we detect vulnerability to homelessness early, to try to prevent homelessness?
Goal: close this gap by increasing the identification and referral of at-risk women Veterans into mental health, social service, and other treatment and preventive services, through implementation of the vulnerability tool (V-tool) in VA primary care and women's health settings
QUERI Step 4, Phase 1: pilot implementation in one healthcare system
Framework: Consolidated Framework for Implementation Research (CFIR)
Specific Aims (corresponding consecutively to CFIR planning, engaging, executing, and reflecting and evaluating phases):
(1a) Assess clinician and clinical staff knowledge, attitudes, beliefs, and expectancies about: vulnerability screening of women in primary care settings, and the Women Veterans V-Tool; and (1b) Assess patient understanding of the Women Veterans V-Tool;
(2) Refine and computerize the V-Tool screener and referral mechanisms, and educate and train clinicians and clinical staff to use the screener;
(3) Implement the V-Tool in one healthcare system; and generate V-Tool Summary Reports to facilitate future patient tracking and V-Tool evaluation;
(4) Revise the V-Tool screener and referral mechanisms based on the implementation-focused evaluation.
Priority products: Interim reports on implementation processes, responses to the intervention, implementation strategies

Example: Screening and Referring Women Veterans for Homelessness Vulnerability
(RRP 11-421, Washington & Hamilton)

CFIR Phase	Activity	Data source(s)	Purpose
Planning (Aim 1)	Developmental formative evaluation with clinicians, staff, patients	Semi-structured interviews	Inform modification of screening, referral processes, content
Engagement (Aim 2)	Implementation strategies (social marketing, education, modeling, training		Prepare for implementation
Execution (Aim 3)	Implementation	Summary reports	Patient screening & tracking
Reflecting and Evaluating (Aim 4)	Impact Evaluation	Semi-structured interviews & usability questionnaire	Feedback about intervention



Interview Guide: Formative Evaluation

- Semi-structured, brief, prioritized, targeted, flexible
  - Focus on CFIR intervention characteristics domain

Construct	Question
Usual practice	To the best of your knowledge, what types of mental health screeners are currently used routinely with women veterans? [probes: which screeners, how often, who delivers]
Evidence strength/quality	Do you think the current screeners are effective in identifying potential risk for homelessness? [If yes, please describe experiences/knowledge of identifying risk with the screeners. If no, please describe why not.]
Complexity Design quality and packaging	[Show tool] What do you think about this? Is there too much/too little in this tool? [If so, what should be deleted/added?] Who do you think should complete the tool, and when should it be done?
Relative advantage	How do you think it compares to other screeners?
Compatibility	How do you think this might fit with how things flow in a patient appointment?

For more on designing interview guides: https://www.youtube.com/watch?v=vMgS0IaHXtg

Rapid analysis steps at a glance***

Step 1: Create a neutral domain name that corresponds with each interview question

Step 2: Create a summary template for use by the team

Step 3: Take the summary template for a "test drive" and assess its usability, relevance, etc.

Step 4: After consistency has been established across the team of summarizers, divide up the transcripts across the team and summarize

Step 5 : Transfer summaries into a matrix (respondent x domain)

****Tailor this process to meet your team's needs/styles and the goals of your project****

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Steps for creating a templated summary

Step 1: Create a *neutral* domain name that corresponds with each interview question

Construct	Question	Domain
Usual practice	To the best of your knowledge, what types of mental health screeners are currently used routinely with women veterans? [probes: which screeners, how often, who delivers]	Currently used screeners
Evidence strength/quality	Do you think the current screeners are effective in identifying potential risk for homelessness? [If yes, please describe experiences/knowledge of identifying risk with the screeners. If no, please describe why not.]	Effectiveness of current screeners
Complexity Design quality and packaging	[Show tool] What do you think about this? Is there too much/too little in this tool? [If so, what should be deleted/added?] Who do you think should complete the tool, and when should it be done?	Response to V-tool format Response to V-tool content Who should complete it When should it be done
Relative advantage	How do you think it compares to other screeners?	Relative advantage
Compatibility	How do you think this might fit with how things flow in a patient appointment?	Fit with patient flow

Steps for creating a templated summary (cont.)

Step 2: Draft a summary template for use by the team

- **Include "Other observations" at the end, for material that doesn't fit into the domain**
- **Include space for important quotations**

TRANSCRIPT SUMMARY

PREPARED BY: Alison

SITE: abc

RESPONDENT ROLE: PCP

CURRENTLY USED SCREENERS

EFFECTIVENESS OF CURRENT SCREENERS

RESPONSE TO V-TOOL FORMAT

Steps for creating a templated summary (cont.)

Step 3: Take the summary template for a "test drive"

- Have team members use the template for the *same subset of transcripts* (n~3)
- Assess template:
  - Are the domains intuitive/ "findable" in the data?
  - Are any domains missing, incorrectly labeled, etc.?
  - Is it easy to use?
  - How long does it take to complete it?
    - Should take about an hour to complete for a 30-45 min interview that was executed according to the guide

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Suggestions & things to note

- Develop a summary template together
- Summarize key points
- Start to process across transcripts

Notice:

- How did you develop the template as a team?
- How was the experience of summarizing?
- What else were you inclined to do with the data?
  - Think about vertical and horizontal
- Were there any frustrations, roadblocks in the process?
- Did you take any other steps (e.g., write memos)?

Steps for creating a templated summary (cont.)

Step 4: After consistency has been established across the team of summarizers, divide up the transcripts/data across the team and summarize; could divide up by site, by role, etc.

TRANSCRIPT SUMMARY

PREPARED BY: Alison

SITE: abc

RESPONDENT ROLE: PCP

CURRENTLY USED SCREENERS

- **"just the one we have to use about whether they'll be homeless in 30 days" (line xx)**

EFFECTIVENESS OF CURRENT SCREENERS

- **Has identified "a few" patients who are at risk of being homeless (line xx)**

RESPONSE TO V-TOOL FORMAT

- **Good because it's short (line xx)**

Steps for creating a templated summary (cont.)

What makes for a good summary?

- Brief (~2 pages)
- Organized
- Thorough (major points captured)
- Readable
  - *Anyone reading the summary should get a sense of what the respondent said*
- Useful (e.g., provides pointers for what's in the transcript, where to go)

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Displaying your data using the summaries

Step 5: Transfer (copy & paste) summary points into a matrix (e.g., respondent x domain)

"Matrices streamline the process of noting simultaneously and systematically similarities, differences, and trends in responses across groups of informants" (Averill 2002, p. 856)

- They make the "synthesis and summary of important findings accessible to audiences who might otherwise never take the time to examine the voluminous data generated by the interview process, domain analysis, and thematic analysis" (p. 864)

Averill JB. Matrix analysis as a complementary analytic strategy in qualitative inquiry. Qual Health Res. 2002 Jul;12(6):855-66.

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Data display (cont.)

- Displays are "designed to assemble organized information into an immediately accessible compact form so that the analyst can see what is happening and either draw justified conclusions or move on to the next step of analysis…"
- "…the creation and use of displays is not separate from analysis, it is a *part* of analysis."

(Miles & Huberman, *Qualitative Data Analysis: An Expanded Sourcebook*, 1994, p. 11)

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	CURRENTLY USED SCREENERS	EFFECTIVENESS OF CURRENT SCREENERS	RESPONSE TO V-TOOL FORMAT
SITE 1	*[Could summarize this domain here]*		
Interview 1	• "just the one we have to use about whether they'll be homeless within 30 days"	• Has identified "a few" patients who are at risk of being homeless	• Good because it's short
Interview 2	• "my nurse does the screeners"	• Seems ok but doesn't really know how accurate it is	• Like that it's short • Worried about answers • Who will ask patients? • Do I do this and the other one?
Interview 3	• Yes it's mandatory, "I use it"	• Not many patients say yes but we still have to ask	• At least it's not long • What will we do if they say yes?

Modify screener

Matrix analysis: what can the matrix do for you?

With the matrix, you can:

- Quickly peruse content of any given domain
  - Get a sense of variation
- Assess gaps in information
  - Assess why those gaps exist: Question not asked? Question didn't work well?
- Develop memos (e.g., "what I know so far" memo, topic memos, project memos)
- Develop summaries of domains, sites, types of respondents, etc.

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A worked example: implementation of genetic services

Interview guide question	Domain
Let’s start with a picture of existing genetic services at your VA. Can you describe any current services for me?	Current services
Have you ordered genetic tests for your patients? If so, what has been your experience of ordering of genetic tests at your VA?	Experience ordering tests
In general, what would you say is the general awareness of genetic services among providers?	Knowledge/awareness of providers
What barriers exist regarding adoption and delivery of genetic services at your VA?	Barriers to adoption of genetic services
What would ideal genetic services look like, from your perspective?	Ideal services
What suggestions do you have for helping clinicians in your specialty keep up with developments in genetic medicine?	Updating professional knowledge

Partial matrix

Background, academic affiliation	**Any services**	**Experience ordering tests**	**Knowledge/ awareness of providers**	**Barriers to adoption of genetic services**	**Ideal services**	**Updating prof. knowledge**
	No formal services; no formal process for requesting tests “but there *is* a process”	Tried to for dx purposes “There are select genetic tests that are ordered widely by I would say the second category of providers that I described, those who in general don't have much knowledge."	“If you were to take someone who tends not to think about genetic diseases so much, I would say that the vast majority of providers in our center fall into that category, and they're operating in a knowledge vacuum.” 2 categories: 1) neurologists, who see a lot of genetic disease, and they “do the genetic workup themselves”; and 2) everybody else	**“Militant utilitarianism”** Attitudes Budget	“more genetically-minded individuals coming on board, as their medical school training will have been transformed to reflect the genetic/genomic revolution”	Grand rounds not so effective

Applying a framework:
Diffusion of innovations in service organizations (Greenhalgh et al. 2004)

Innovation characteristic	Definition	Themes/notes	Quotations	Discussion points
Relative advantage				
Compatibility				
Complexity	Simple to use	Genetic testing as a “package” is complex; many different tests w/diff indications, costs, clinical meanings	“I think the openness is inversely proportional to whether or not it creates more work for the provider…”	Overall genetic testing has not been rendered simple to use except for a few tests that are used frequently enough to have formal mechanisms in place for ordering and interpreting results (e.g., Factor V Leiden; hemachromatosis; BRCA)
Trialability				
Observability				
Reinvention				

Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of innovations in service organizations: systematic review and recommendations. The milbank quarterly. 2004 Dec;82(4):581-629.

Operational definitions for analysis
Themes w/evidence (quotations)

Table 1 Diffusion of innovation in service organizations applied to genetic services

Attribute	Content	Operational definition for thematic analysis
Relative advantage	Clear, unambiguous advantage of the innovation in terms of effectiveness or cost-effectiveness	• Knowledge/awareness of the intended uses of genetic services (medical, reproductive, and personal decision making) and indications for genetic testing (e.g., diagnostic, predictive, and pharmacogenetic) • Knowledge/awareness of genetic tests with proven clinical validity and utility
Compatibility	"Fit" between innovation and organizational values, norms, and perceived needs; as well as providers' values, professional norms, and ways of working	• Local or system-wide policies regarding coverage for genetic services • Providers' attitudes toward new technologies
Complexity	Innovations that are simpler to use will be easier to adopt	• Perceived complexity of genetic tests • Barriers to utilizing genetic services (e.g., genetic tests not available in the laboratory test order menu)

Table 3 Continued

Themes: perceived characteristics of genetic services	Illustrative quotes
Complexity	
Knowing when and which genetic tests to order is complex	"We talk about genetic testing as if it's one thing, but it's obviously thousands of different individual tests and each one has its own indication." (Neurology)
Interpreting results of genetic tests is complex	"For lymphoma, there are well-documented data that a panel of few as seven cytogenetic abnormalities might be all you need to…identify the subgroup of patients…that have a more aggressive disease. That has never caught on as much as I thought five years ago and I think part of it is the complexity of interpretation." (Oncology)

Hamilton AB, Oishi S, Yano EM, Gammage CE, Marshall NJ, Scheuner MT. Factors influencing organizational adoption and implementation of clinical genetic services. Genetics in Medicine. 2014 Mar;16(3):238-45.

Mixed methods

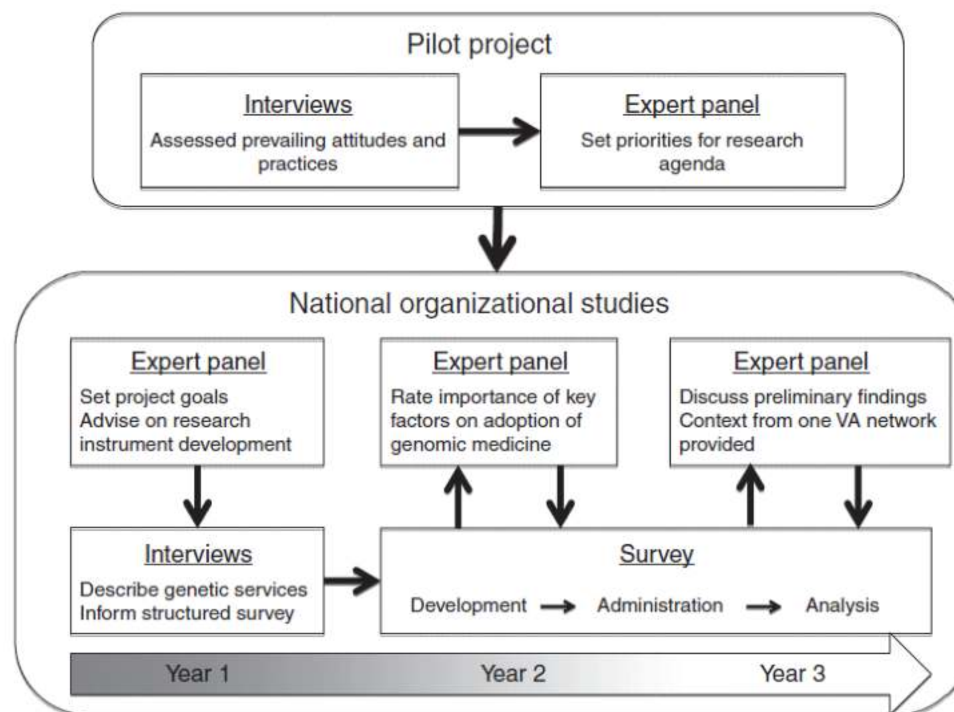

Figure 2 Application of a three-component methodological approach in pilot work and in a national organizational study. For our pilot

Oishi SM, Marshall N, Hamilton AB, Yano EM, Lerner B, Scheuner MT. Assessing multilevel determinants of adoption and implementation of genomic medicine: an organizational mixed-methods approach. Genetics in Medicine. 2015 Nov;17(11):919-26.

From analyses to publishing

© American College of Medical Genetics and Genomics ORIGINAL RESEARCH ARTICLE Genetics inMedicine

Factors influencing organizational adoption and implementation of clinical genetic services

Alison B. Hamilton, PhD, MPH[1,2], Sabine Oishi, PhD, MSPH[1], Elizabeth M. Yano, PhD, MSPH[1,3], Cynthia E. Gammage, BA[1], Nell J. Marshall, DrPH[1,3] and Maren T. Scheuner, MD, MPH[1,4]

Qual findings

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Assessing multilevel determinants of adoption and implementation of genomic medicine: an organizational mixed-methods approach

Sabine M. Oishi, PhD, MSPH[1], Nell Marshall, DrPH, MPH[1], Alison B. Hamilton, PhD, MPH[1,2], Elizabeth M. Yano, PhD, MSPH[1,3], Barbara Lerner, PhD, MS[4] and Maren T. Scheuner, MD, MPH[1,5,6]

Mixed methods

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Delivery of clinical genetic consultative services in the Veterans Health Administration

Maren T. Scheuner, MD, MPH[1–3], Nell Marshall, DrPH[1], Andrew Lanto, MA[1], Alison B. Hamilton, PhD, MPH[1,4], Sabine Oishi, PhD, MSPH[1], Barbara Lerner, MS, PhD[5], Martin Lee, PhD[1] and Elizabeth M. Yano, PhD, MSPH[1,6]

Quant findings: overall

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The value of genetic testing: beyond clinical utility

Barbara Lerner, PhD, MS[1], Nell Marshall, DrPH[2], Sabine Oishi, PhD, MSPH[2], Andrew Lanto, MS[2], Martin Lee, PhD[2], Alison B. Hamilton, PhD, MPH[2,3], Elizabeth M. Yano, PhD, MSPH[2,4] and Maren T. Scheuner, MD, MPH[2,5]

Quant findings: focus on utility

What can you do with your rapid analysis?

- Obtain a **quick accessible overview** of what’s in the data
  - Especially important/useful if you did not collect all of the data
  - Helpful for giving yourself/your team a starting place
- Use summaries to **inform subsequent waves of data collection**
- **Prepare deliverables**: reports, presentations, manuscripts
- Develop **topic monitoring** (aka coding) approach that is informed by depth and breadth of data related to each domain
- **Divide up the labor** of reviewing transcripts
  - With sufficient training, can be done by individuals who don’t have extensive qualitative methods training
- Assess **quality of data collection** across team

Frequently asked questions: technical/methodological

- Do summaries need to be checked?
- How do you summarize focus groups?[1]
- Do you need transcripts for rapid analysis?[2]

✓ Can you write memos as you summarize?

[1]Fox AB, Hamilton AB, Frayne SM, Wiltsey-Stirman S, Bean-Mayberry B, Carney D, Di Leone BA, Gierisch JM, Goldstein KM, Romodan Y, Sadler AG. Effectiveness of an evidence-based quality improvement approach to cultural competence training: The Veterans Affairs' "Caring for Women Veterans" program. Journal of Continuing Education in the Health Professions. 2016 Apr 1;36(2):96-103.

[2]Abraham TH, Finley EP, Drummond KL, Haro EK, Hamilton AB, Townsend JC, Littman AJ, Hudson T. A Method for Developing Trustworthiness and Preserving Richness of Qualitative Data During Team-Based Analysis of Large Data Sets. American Journal of Evaluation. 2020 Aug 20:1098214019893784.

Summarizing focus groups

Pre-Implementation Focus Group
Summary prepared by AH
[Date]

Q1. What does gender sensitivity mean?

- As important for the staff as for the patients (lines xx-xx)
- Need more education about transgendered patients (lines xx-xx)

Q2. What would constitute a gender-sensitive environment?

- Using pronouns other than just "he" (lines xx-xx)
- Being mindful of any written material or presented, that it be all inclusive (lines xx-xx)
- Access to bathroom; "comes down to plumbing" (lines xx-xx)
- We need to make all of our Veterans feel welcome regardless of their gender identification (lines xx-xx)

Q3. Could more be done here to improve gender sensitivity?

- Just signage, friendly reminders; if we have signs, people may get used to that and be more sensitive (lines xx-xx)
- Some women are spouses; not everybody who comes to the VA for care is a Vet; need education on that, too (lines xx-xx)
- Certain spaces are male-dominated and uncomfortable; target those areas with signage (lines xx-xx)

Q4. What works best to get you to do something that is highly encouraged but not necessarily mandated?

- If it's not pushed and it's not mandatory, then people aren't going to get it done, especially if there are no consequences (lines xx-xx)
- Make the training as appealing as possible and then maybe doing some advertising, some marketing for it; get people excited about doing it and learning more about it (lines xx-xx)

Q5. Who might need gender-sensitivity training?

- Women Veterans should facilitate trainings (lines xx-xx)
- Front desk and support staff (lines xx-xx)
- Volunteers, like drivers (lines xx-xx)
- Do training at new-employee orientation (lines xx-xx)

Qualitative data were analyzed using a rapid analytic approach.[31] Main topics ("domains") were drawn from the interview and focus group guides and a summary template was developed. Three team members (A.B.F., B.A.L.D., and S.W.-S.) used the template to summarize the same three transcripts to ensure that the domains were identifiable in the data and that there was consistency across team members in capturing the domains. Once consistency of summary content was established, transcripts were divided up across the team and summarized using the template. Bullet points from the summary templates were then placed into a matrix to analyze the depth and breadth of information for each domain.[32] Aggregated preliminary results were presented to site leadership to facilitate cross-checking[33] (ie, confirming credibility of the preliminary analysis). Subsequent to this initial process, transcripts were analyzed by the second author using ATLAS.ti, with top-level codes corresponding to the previously identified domains and subcodes and emergent codes developed after thorough review of main content areas.

Fox AB, Hamilton AB, Frayne SM, Wiltsey-Stirman S, Bean-Mayberry B, Carney D, Di Leone BA, Gierisch JM, Goldstein KM, Romodan Y, Sadler AG. Effectiveness of an evidence-based quality improvement approach to cultural competence training: The Veterans Affairs' "Caring for Women Veterans" program. Journal of Continuing Education in the Health Professions. 2016 Apr 1;36(2):96-103.

Frequently asked questions: philosophical/epistemological

- Isn't this very reductionistic?
- Aren't we losing detail and nuance with this approach?
- Does rapid replace coding?
- Can you identify themes with a rapid approach?[1]
- Can you publish results based on rapid analysis only?

[1]For a construct-driven rapid approach, see Gale RC, Wu J, Erhardt T, Bounthavong M, Reardon CM, Damschroder LJ, Midboe AM. Comparison of rapid vs in-depth qualitative analytic methods from a process evaluation of academic detailing in the Veterans Health Administration. Implementation Science. 2019 Dec 1;14(1):11.

Limitations

- Not well-suited for unstructured qualitative data
  - Experiential, phenomenological data
  - Better suited to transcribed data
    - But alternatives are being developed and published (see Abraham et al., 2020, Nevedal et al., 2021)
- Better accomplished by embedded researchers with working knowledge of contexts and topics (see Taylor et al., 2018)
- Less reliant on quotations (instead, points the user to where the quotations are located)
- Completion of summaries variable across team members (importance of norming and spot-checking)
  - Volume/style
  - Paraphrasing
  - Interpretation
- Not sufficient analytically for some journal/reviewer expectations
- Risk/danger of using rapid as a substitute for rich engagement with the data

Comparing approaches

Rapid vs. thematic analysis (Taylor et al., 2018)

- Compared Hamilton rapid analysis (RA) to thematic analysis (TA) using the framework method (Ritchie & Lewis)
- Reporting style in RA more accessible to intended audience
- RA took 1/3 time of TA, but RA interpretation and write-up took longer than TA
- Considerable overlap in findings

Of note:

- RA team unconsciously suppressed two findings that were politically challenging
- RA in a health service setting without background knowledge may be inappropriate (importance of being embedded)
- 'did-not-find rate' of around 1 in 10 for both methods→qualitative researchers will never elicit perfectly overlapping findings, regardless of method
- "We do not advocate RA for granular exploration of complex questions, for example, individuals' experience of phenomena."

Taylor B, Henshall C, Kenyon S, Litchfield I, Greenfield S. Can rapid approaches to qualitative analysis deliver timely, valid findings to clinical leaders? A mixed methods study comparing rapid and thematic analysis. BMJ Open. 2018 Oct 8;8(10):e019993.

Comparing approaches

Rapid versus traditional deductive Consolidated Framework for Implementation Research (CFIR) approach (Nevedal et al., 2021)

In-depth manual coding using software
683 hours, transcription costs
Facility-level analysis: 14 hours/facility

- Time for interpretation the same for both approaches
- Both approaches met project goal
- Rapid allowed team to share results more quickly with partners

Rapid deductive analysis (directed content analysis)
Notes during interview→ "coded" notes into Excel CFIR construct x facility matrix→reviewed audio & edited matrix
409.5 hours, no transcription costs, reduced analysis time by 79 hours
Facility-level analysis: 3.02 hours/facility

Nevedal AL, Reardon CM, Opra Widerquist MA, Jackson GL, Cutrona SL, White BS, Damschroder LJ. Rapid versus traditional qualitative analysis using the Consolidated Framework for Implementation Research (CFIR). Implementation Science. 2021 Dec;16(1):1-2.

Comparing approaches

Rapid versus traditional deductive CFIR approach (Nevedal et al., 2021)

Considerations:

- Team expertise in CFIR and qual methods
  - Recommend linking CFIR constructs and definitions to interview questions within a notes template
- Level of detail needed to meet project aims
- Mode of data to analyze
- Advantages and disadvantages of using CFIR
  - Need to remain open to inductive topics or domains that arise in the data

Nevedal AL, Reardon CM, Opra Widerquist MA, Jackson GL, Cutrona SL, White BS, Damschroder LJ. Rapid versus traditional qualitative analysis using the Consolidated Framework for Implementation Research (CFIR). Implementation Science. 2021 Dec;16(1):1-2.

Comparing approaches

Rapid vs. in-depth analytic methods (Gale et al., 2019)

RA: summarized transcripts using structured template based on CFIR, consolidated into matrices [could have explicitly incorporated CFIR constructs into RA summary tables]

In-depth: line-by-line coding using CFIR ~ 6 months after RA

Findings were consistent; RA was sufficient for primary evaluation goals

69 days longer to complete in-depth analysis (conservative estimate)

Gale RC, Wu J, Erhardt T, Bounthavong M, Reardon CM, Damschroder LJ, et al. Comparison of rapid vs in-depth qualitative analytic methods from a process evaluation of academic detailing in the Veterans Health Administration. Implement Sci. 2019;14(1):11.

Analytic cousins

Template analysis (see e.g., Brooks et al. 2015)

- "Style of thematic analysis"
- Hierarchical coding, structured but flexible
- Coding template (can start with tentative *a priori* themes)
- "not inextricably bound to any one epistemology"

Framework analysis (see e.g., Gale et al., 2013)

- Codebook approach (like template analysis)
- "no allegiance to either inductive or deductive thematic analysis"
- "Like all qualitative analysis methods, the Framework Method is time consuming and resource-intensive."
- Summarizing data by category from each transcript (after coding) into framework matrix (see Additional File 1)

Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative research in psychology*, *12*(2), 202-222.

Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC medical research methodology*, *13*(1), 1-8.

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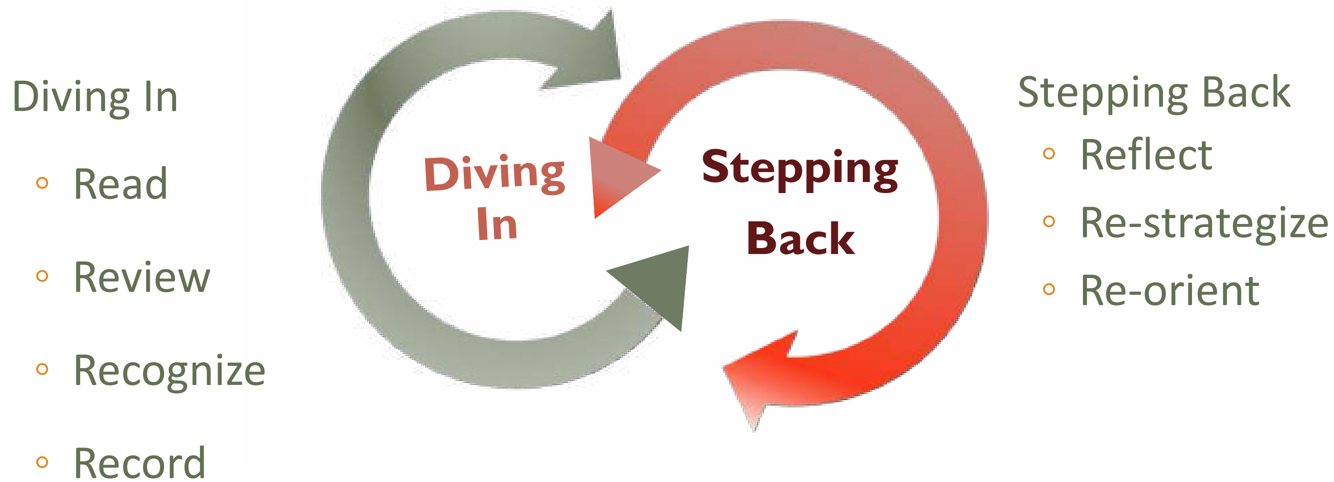
Analytic context for rapid approach: Sort and Sift, Think and Shift (Maietta et al., 2021)

Diving In

- Read
- Review
- Recognize
- Record



Stepping Back

- Reflect
- Re-strategize
- Re-orient

The "diving in" and "stepping back" phases of the Sort and Sift method are necessarily interdependent and synergistic.

Maietta R, Mihas P, Swartout K, Petruzzelli J, Hamilton AB. Sort and Sift, Think and Shift: Let the Data Be Your Guide An Applied Approach to Working With, Learning From, and Privileging Qualitative Data. Qualitative Report. 2021 Jun 1;26(6).

What happens *after* your rapid analysis?

GO BACK TO THE DATA! DIVE BACK IN!

- Ask: what stories live beyond these topics? Where do these topics take me?
- How can you go further into the data "to grab more of the subtleties of experience" (Sandelowski & Barroso 2003)
- Use other tools to keep working in and through your data

STEP BACK! What have I learned? What connections am I seeing?

- What evidence do I have?
- What stories can I tell?
- What contributions can I make?

What happens *after* your rapid analysis?

Review summaries and matrices to:

- Become familiar with the breadth and depth of data for each domain
  - How will you break down each domain for further analysis?
- Develop memos
- Develop top-level topics to monitor (aka codes)

- Identify where data is (and is not) available (develop analytic sample)

Try different tools

- Coding with top-level codes
- Coding subsets of transcripts for specific products with additional subcodes (usually emergent/inductive)
- Memoing
- Diagramming

Always:

- Conduct regular audits
- Document analytic process in methods memo

Special thanks to Dr. Tanya Olmos-Ochoa for her contributions to this slide.

Qualitative findings: what are they?

- “data-driven and integrated discoveries, judgments, and/or pronouncements researchers offer about the phenomena, events, or cases under investigation” (Sandelowski & Barroso 2003)

So…what’s a theme?

- “Truer to the interpretive meaning of theme, thematic surveys convey an underlying or more latent pattern or repetition discerned in the data: These reports revealed more of a discernible effort to move away from merely listing topics (or subjects brought up by participants) toward describing themes (or the patterned responses researchers discerned from the topics raised).” (Sandelowski & Barroso 2003)

Sandelowski, M., & Barroso, J. (2003). Classifying the findings in qualitative studies. Qualitative Health Research, 13(7), 905-923.

Themes: what are they? (Ryan & Bernard 2003)

- "Conceptual linking of expressions"

What can you look for (and can you find themes in RA)?

- ✓ Repetitions (the more the same concept occurs, the more likely it's a theme)
- ✓ Indigenous typologies or categories
- ✓ Metaphors and analogies
- Transitions
- ✓ Similarities and differences in expressions
- Linguistic connectors
- ✓ Missing data (what isn't already associated with a theme?)
- Theory related material (control, power, conflict, etc.)

Ryan GW, Bernard HR. Techniques to identify themes. Field methods. 2003 Feb;15(1):85-109.

Typology of findings from qualitative metasynthesis

Closest to data

Not findings (data) → **Least transformed (rapid fits here)**

Topical survey

Thematic survey (exploratory)

Conceptual/thematic description (descriptive)

Interpretive explanation (explanatory)

Farthest from data

→ **Most transformed**

"…they do not contain any interpretation of what these stories mean or where they are located in the world of stories"

Qualitative (?)

Sandelowski, M., & Barroso, J. (2003). Classifying the findings in qualitative studies. Qualitative Health Research, 13(7), 905-923.

Memoing: writing for reflection and discovery

"a documented conversation with data…a form of rigor…a systematic space to track cumulative illustrative 'evidence'" (Mihas 2022)

Project Memos

- What do I know so far?
- What space am I driving into?
- **Methods journal – decision-making monitor**
- Core project research questions
- Emergent discoveries
- Future studies

Each Episode

- Episode (case) profile
- "Document reflection memo" (Mihas 2022)
- Segment/quotation memos

Topic Memos

- Topic origin
- Why is the topic important to the study?
- Topic discoveries and conversation…

Mihas, P. Memo writing strategies: analyzing the parts and the whole. In Analyzing and Interpreting Qualitative Research (Vanover, Mihas, Saldana, Eds.). SAGE, 2022.

Perfection is not the goal of memos

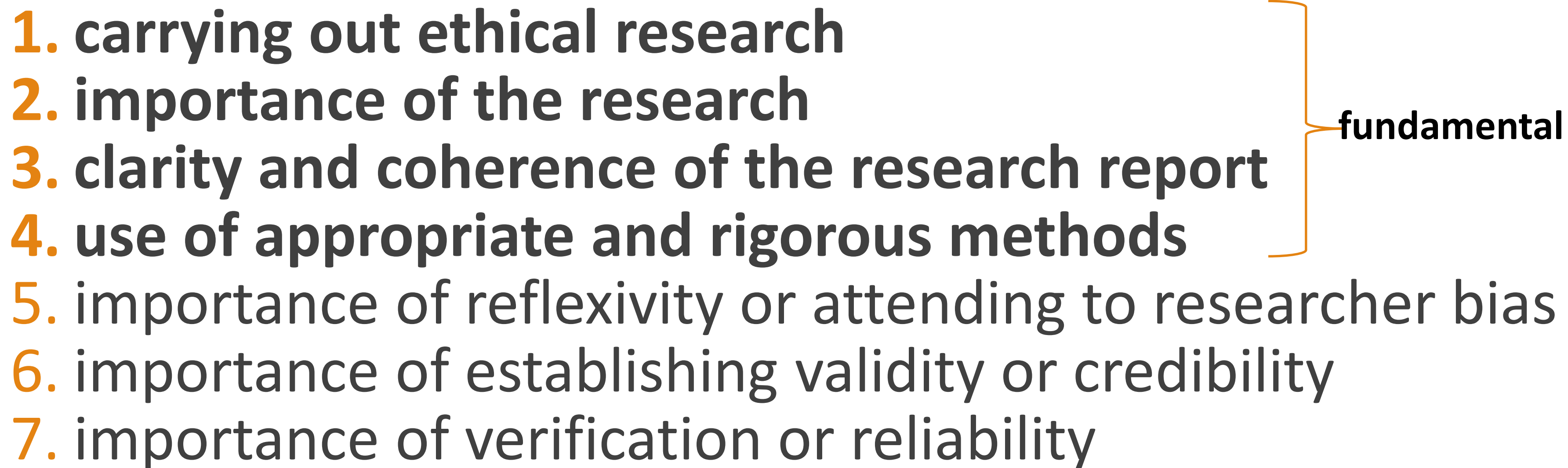
- The audience for memos is you—write them in your own style
  - Work on them with your team
- Give yourself permission to start from a place of little knowledge with your memos, and see what happens, let it grow
- You don't have to be brilliant right away

> "Writing a document reflection memo on each transcript is a way to work vertically through each participant's experience using a wide-angle lens. Such memos provide a condensed, yet comprehensive account of the narrative trajectory of each interview—pivotal moments, takeaways, and governing perspectives that give shape to the transcript as a whole." (Mihas 2022)

Mihas, P. Memo writing strategies: analyzing the parts and the whole. In Analyzing and Interpreting Qualitative Research (Vanover, Mihas, Saldana, Eds.). SAGE, 2022.

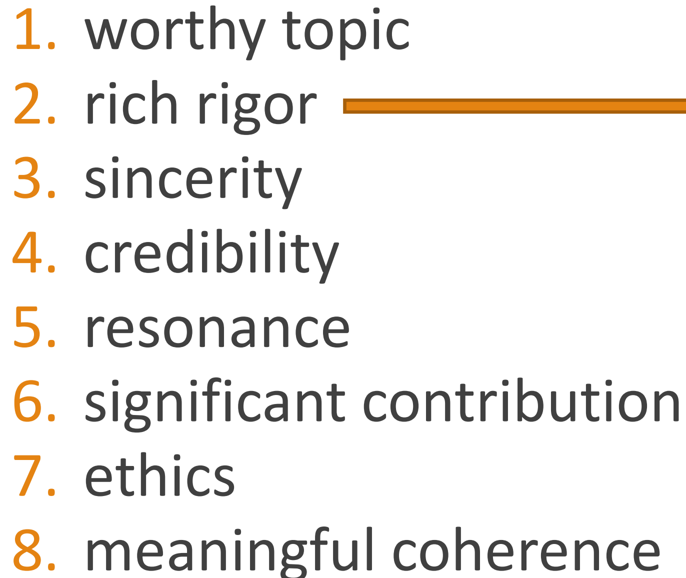
Return to the fundamentals:
What is “good” qualitative research?

Cohen and Crabtree (2008)



Cohen, D. J., & Crabtree, B. F. (2008). Evaluative criteria for qualitative research in health care: Controversies and recommendations. The Annals of Family Medicine, 6, 331–339.

Return to the fundamentals:
What is "good" qualitative research?



What is "rich rigor"?
The study uses sufficient, abundant, appropriate, and complex:

- Theoretical constructs
- Data and time in the field
- Sample(s)
- Context(s)
- Data collection and analysis processes

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. Qualitative Inquiry, 16, 837–851.

Currently 170+ papers cite 2013 cyberseminar

A select few:

Abraham TH, Wright P, White P, Booth BM, Cucciare MA. Feasibility and acceptability of shared decision-making to promote alcohol behavior change among women Veterans: Results from focus groups. Journal of Addictive Diseases. 2017 Oct 2;36(4):252-63.

Barnett M, Brookman-Frazee L, Regan J, Saifan D, Stadnick N, Lau A. How intervention and implementation characteristics relate to community therapists' attitudes toward evidence-based practices: A mixed methods study. Administration and Policy in Mental Health and Mental Health Services Research. 2017 Nov 1;44(6):824-37.

Gabrielian S, Hamilton AB, Gelberg L, Koosis ER, Johnson A, Young AS. Identifying social skills that support housing attainment and retention among homeless persons with serious mental illness. Psychiatric Services. 2019 May 1;70(5):374-80.

Iverson KM, Adjognon O, Grillo AR, Dichter ME, Gutner CA, Hamilton AB, Stirman SW, Gerber MR. Intimate partner violence screening programs in the Veterans Health Administration: informing scale-up of successful practices. Journal of general internal medicine. 2019 Nov 1;34(11):2435-42.

Lehavot K, Litz B, Millard SP, Hamilton AB, Sadler A, Simpson T. Study adaptation, design, and methods of a web-based PTSD intervention for women Veterans. Contemporary clinical trials. 2017 Feb 1;53:68-79.

McHugh M, Brown T, Liss DT, Walunas TL, Persell SD. Practice facilitators' and leaders' perspectives on a facilitated quality improvement program. The Annals of Family Medicine. 2018 Apr 1;16(Suppl 1):S65-71.

Olmos-Ochoa TT, Bharath P, Ganz DA, Noël PH, Chawla N, Barnard JM, Rose DE, Stockdale SE, Simon A, Finley EP. Staff Perspectives on Primary Care Teams as De Facto "Hubs" for Care Coordination in VA: a Qualitative Study. Journal of general internal medicine. 2019 May 15;34(1):82-9.

Palinkas LA, Mendon SJ, Hamilton AB. Innovations in mixed methods evaluations. Annual review of public health. 2019 Apr 1;40:423-42.

Purcell N, Burkman K, Keyser J, Fucella P, Maguen S. Healing from moral injury: A qualitative evaluation of the impact of killing treatment for combat veterans. Journal of Aggression, Maltreatment & Trauma. 2018 Jul 3;27(6):645-73.

Purcell N, Zamora K, Tighe J, Li Y, Douraghi M, Seal K. The integrated pain team: A mixed-methods evaluation of the impact of an embedded interdisciplinary pain care intervention on primary care team satisfaction, confidence, and perceptions of care effectiveness. Pain Medicine. 2018 Sep 1;19(9):1748-63.

Publishing from a rapid analysis

Data Analysis

Interview recordings were transcribed verbatim by a professional transcription agency. We used a modified form of rapid qualitative analysis developed by Hamilton and colleagues.[12,13] First, two authors (E.A. and K.D.) created a summary template organized by interview topics (eg, "tele-TCMLH challenges," "recruitment challenges"). These two authors then independently summarized the same three transcripts using the template and discussed experiences, which resulted in several sections in the template being merged or added anew. After the template was finalized, three authors (E.A., K.D., Z.R.) applied the summary template to the remaining transcripts. In a departure from Hamilton's approach, we also included illustrative quotes at the bottom of each template, numbering them and referencing them in the main text of the summary (Q1, Q2, etc.) for ease of retrieval. As a final preparatory step, contents of each summary (with the exception of the illustrative quotes) were extracted and pasted into a Microsoft Excel matrix, with rows corresponding to participants and columns corresponding to template domains. After the matrix was constructed, the same three analysts reviewed the matrix to identify recurring themes. To fully develop each theme, the analysts reviewed the quotations captured in the templates and purposefully looked for variation and counterexamples across participants. The themes were further refined with input from the larger group of authors.

Lessons Learned From VHA's Rapid Implementation of Virtual Whole Health Peer-Led Groups During the COVID-19 Pandemic: Staff Perspectives

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Anderson E, Dvorin K, Etingen B, Barker AM, Rai Z, Herbst A, Mozer R, Kingston RP, Bokhour B. Lessons learned from VHA's rapid implementation of virtual whole health peer-led groups during the COVID-19 pandemic: Staff perspectives. Global Advances in Health and Medicine. 2022 Dec 4;11:21649561211064244.

Publishing from a rapid analysis

Adaptability on Shifting Ground: a Rapid Qualitative Assessment of Multi-institutional Inpatient Surge Planning and Workforce Deployment During the COVID-19 Pandemic

Angela Keniston, MSPH[1], Matthew Sakumoto, MD[2], Gopi J. Astik, MD/MS[3], Andrew Auerbach, MD, MPH[4], Shaker M. Eid, MD/MBA[5], Kirsten N. Kangelaris, MD/MAS[6], Shradha A. Kulkarni, MD[6], Tiffany Lee, MA[7], Luci K. Leykum, MD/MBA/MSc[8], Anne S. Linker, MD[9], Devin T. Worster, MD MPH[10], and Marisha Burden, MD[11]

Table 2 Themes Identified Across Domains

Domain	Theme	Quote
What adaptations have proved most useful?	Approaches to deciding to add capacity	"We can fluctuate by ~30 patients per day overnight…The beautiful thing about all of our medicine admissions filtering through a triagist is that it allows us to turn these systems on and off really quickly…it allows us to "down-flex" the overall plan pretty easily because there is one person who dictates patient flow and capacity" (Focus group 5, advanced practice provider)
	Recruitment and staffing strategies	"What worked really well in the Spring was redistribution of APPs. We have a robust APP pool for the general medicine service and a chief PA who ran the deployment service really well. Residents were put more in ICU-level care, and we staffed the floor COVID teams with attending physicians working with two PAs…We had a lot of inpatient subspecialists (cardiologists, oncologists) help with inpatient COVID work" (Focus group 4, attending physician)

Analysis

Our analysis was conducted in a two-step process using a rapid qualitative analytic approach.[19,21–25] First, a team member who did not participate in the specific focus group used a standard template to create a summary of each group's session, incorporating both the audio recording and the moderator's field notes (MB, GA, SK, AL, MS, AK, LL). Second, all workgroup team members participated in creating an analysis matrix [21] of the summaries of each focus group. Each row was a focus group and each column referred to a unique question we asked each focus group. One workgroup member completed the matrix by logging key points summarized for each focus groups' discussion of each question into the matrix (AK). Individually, workgroup members then identified themes and subthemes across all focus group discussions of each question (MB, GA, SK, AL, MS, AK, LL). As a group, workgroup team members then met to discuss and reach consensus regarding themes identified (MB, DW, GA, SK, AL, MS, AK, LL). As the focus groups were conducted simultaneously, all data were used in the analysis rather than in considering data saturation. Member checking, a technique for confirming the credibility of results, was conducted.[26] Two members of the workgroup who participated in a focus group but who did not moderate a focus group, create a summary, or participate in the analysis reviewed the findings to confirm the themes reflected their experience as a focus group participant (SE, KK).

Keniston A, Sakumoto M, Astik GJ, Auerbach A, Eid SM, Kangelaris KN, Kulkarni SA, Lee T, Leykum LK, Linker AS, Worster DT. Adaptability on Shifting Ground: a Rapid Qualitative Assessment of Multi-institutional Inpatient Surge Planning and Workforce Deployment During the COVID-19 Pandemic. Journal of general internal medicine. 2022 Mar 22:1-9.

Thank you!