



# Job/Practice/Task/Competency Analysis – *What does it all mean?*

Susan Davis-Becker, Ph.D., **ACS Ventures**

Jaime Kavanaugh, MS.Ed., **ACS Ventures**

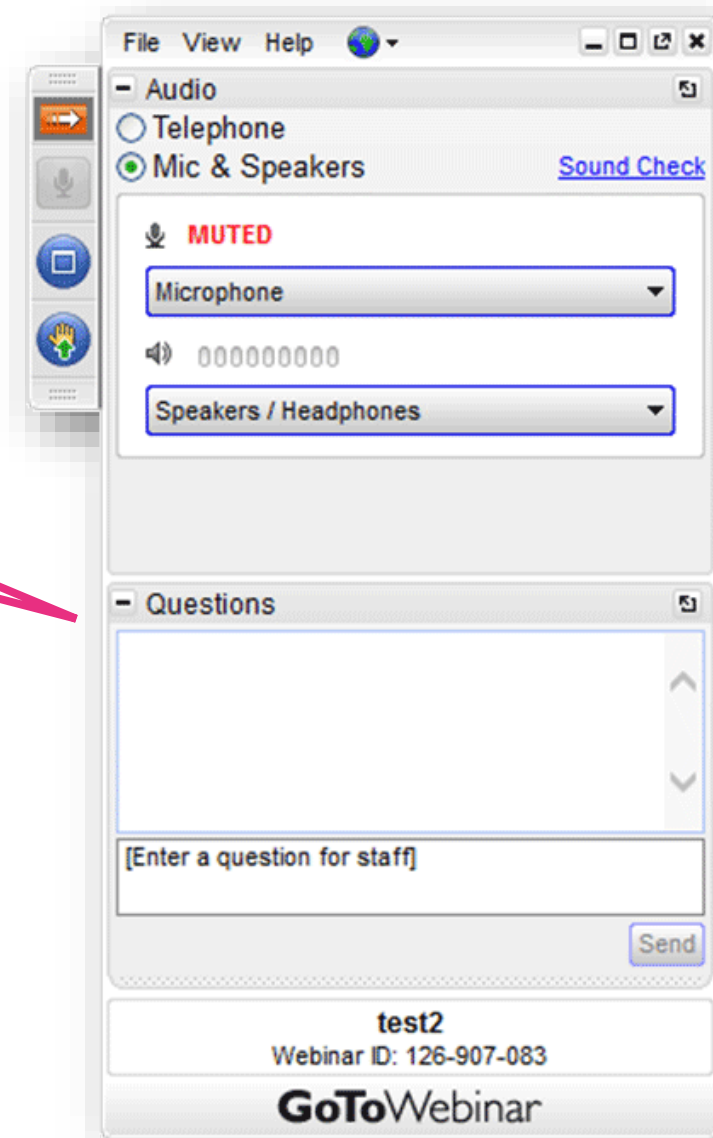
Brian McNamara, **Questionmark**



To ask questions,  
use the “Questions”  
feature

**Watch for an email after the webinar:**

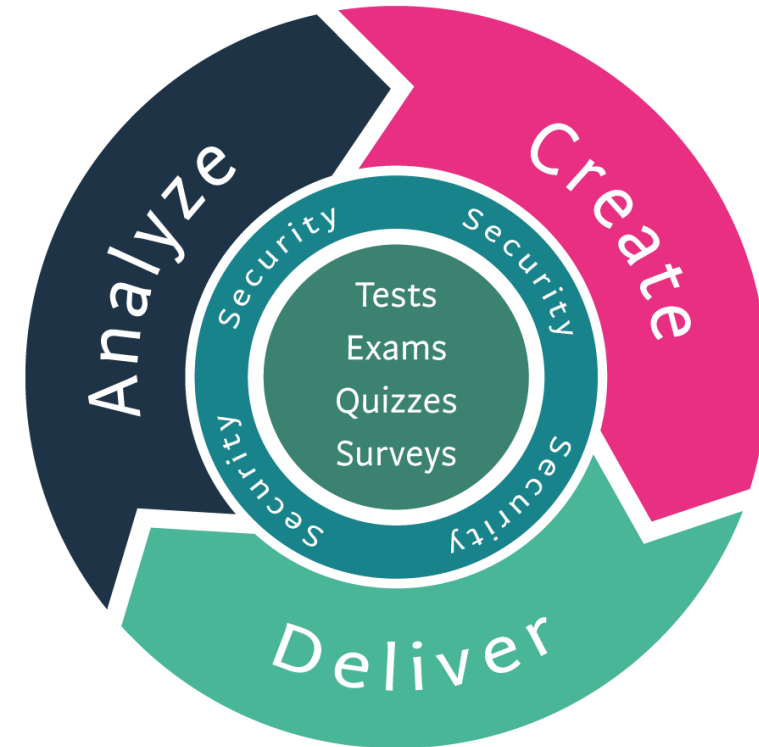
- Download slides (PDF)
- View a recording
- Answer a survey



# About Questionmark

## Background

- Founded in 1988
- Assessment solutions to measure knowledge, skills, abilities and attitudes securely for certification, regulatory compliance, workforce learning, sales-force readiness and higher education
- ISO/IEC 27001 Certified (Learn more: [www.questionmark.com/trust](https://www.questionmark.com/trust))



- *Questionmark OnDemand*
- *Questionmark OnDemand for Government*
- *Questionmark OnPremise*

# Presenters:



**Susan Davis-Becker, Ph.D.**  
*Psychometrician*  
*Founding Partner*  
ACS Ventures



**Jaime Kavanaugh, MS.Ed.**  
*Psychometrician*  
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**Brian McNamara**  
*Product Manager for*  
*Customer Engagement*  
Questionmark

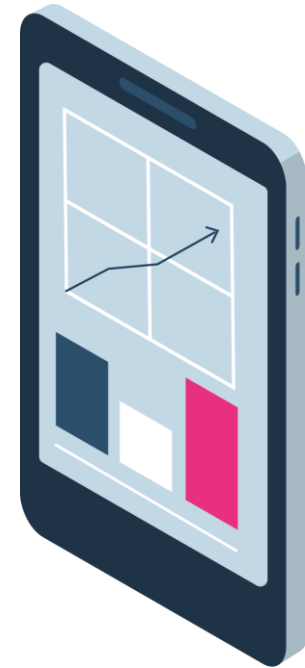
# About ACS Ventures

- Founded in 2016
- We provide design, evaluation, operational support, and quality assurance services to testing programs in credentialing and education.
- Our goal is to bridge psychometric theory with testing practice by providing our clients with practical but innovative solutions to meet their needs.



# Agenda

- Current landscape review
- Job analysis design
- Content framework development



## Quick Poll

**What is your experience with job/practice/task/competency analyses?**

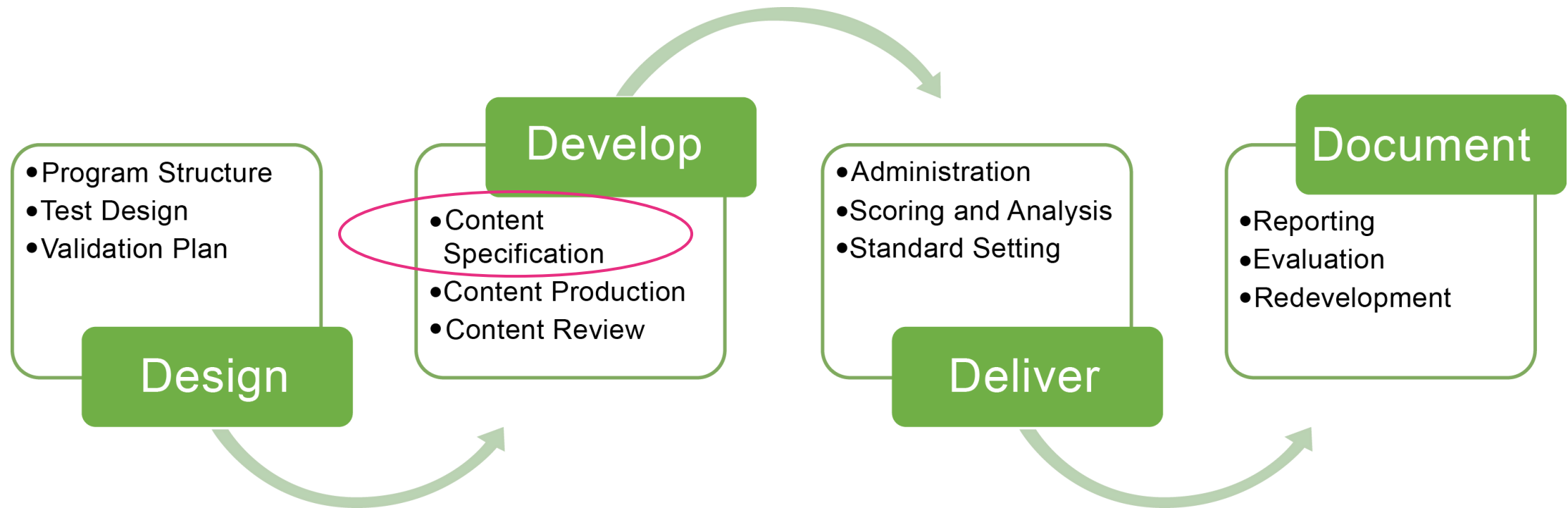
- None, I am new to this!
- I know some about this but am excited to learn more
- I have experience conducting this type of process



# The Basics: Terminology & Methods



# Test Development



# Key Terms

- Subject Matter Expert
- Job / Practice
- Task
- Competency
- Job Task Analysis / Practice Analysis
- Competency Modeling
- Blueprint / Framework / Content Outline

# Processes for Specifying Content

1. **Research**: Gather information on what is relevant to the profession or position
2. **Evaluate**: Assess relevance to broader field
3. **Decide**: Determine what should be included on the credentialing examination



# Relevant Professional Standards

- **AERA, APA, & NCME**

- Standard 11.2: Evidence of validity based on test content requires a thorough and explicit definition of the content domain of interest
- Standard 11.3: When test content is a primary source of validity evidence in support of the interpretation for the use of employment decisions or credentialing, a close link between the test content and the job or professional/occupational requirements should be demonstrated.

- **NCCA Program Accreditation**

- Standard 14: The certification program must have a job analysis that defines and analyzes domains and tasks related to the purpose of the credential, and a summary of the study must be published.
  - Clear delineation of expectations
  - Validation survey (or rationale for not)
  - Report documenting each element
  - Frequency



# Design: Options & Recommendations

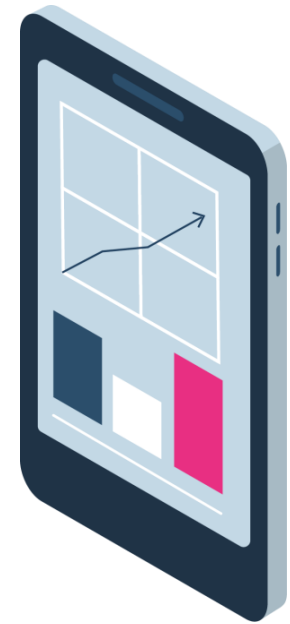
## Quick Poll

**What is your annual candidate administration volume?**

- Small: 0-100 per year
- Medium: 101 – 999 per year
- Large: 1000 or more per year

# Program Considerations

- Program Status
- Program Goals
- Professional Population
- Resources to complete the process
- Information to inform process
- Breadth of the field



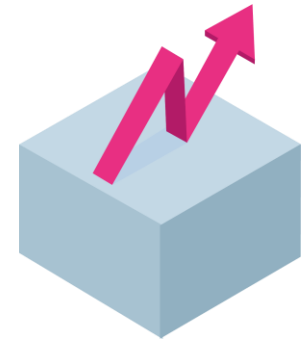
# Stakeholder Engagement Plan

## Who are the relevant stakeholders?

- Professionals
- Employers
- Public
- Educators
- Candidates

## How should the interests of each be represented?

- Research: Direct or Indirect input
- Evaluate: Direct or Indirect input
- Decide: Direct or Indirect input





# Research Phase

- Committee-based process
- Critical Incident Technique
- Review of job descriptions
- Review of professional complaints or grievances

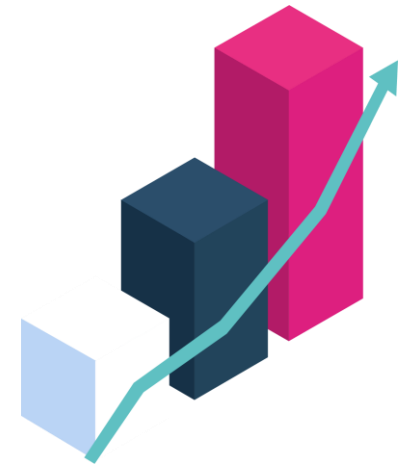


# Evaluate Phase

- Gather input on the results of your research
- Options
  - Survey of practitioners
    - Demographic information
    - Relevance of expectations (tasks, competencies)
      - *Importance*
      - *Frequency*
      - *Criticality*
  - Review by external groups
    - Representation of key stakeholder groups
    - Qualitative feedback for consideration

# Decide Phase

- Review the research based on the results of the evaluate phase
- How relevant is each expectation to the broader field?
- Survey
  - Combine rating scales as appropriate
  - Analyze results for the overall group
  - Compare subgroup of stakeholders
- Feedback from stakeholders
  - Reviewed by Research committee





Putting it into practice

## Quick Poll

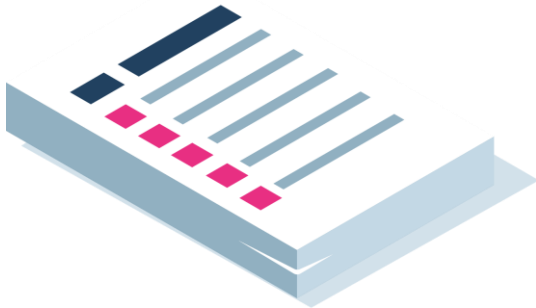
**What is your program's status respect to this process?**

- Brand new, we have not completed this process yet
- We are working through this process now
- We have completed one or more of these in the past
- Not sure

# Decide Phase

## Test Blueprint

- Dimensions
- Content
- Weighting



## Uses

- Internal
  - Inform test content development
  - Set specifications for test form construction
- External
  - Guide candidate preparation
  - Inform educational programs

# Blueprint Decisions

- **What elements from the Research phase will be included?**
  - Not everything identified must be included
  - Balance covering the field but also not watering down the most important parts
  - Allow experts to make this decisions using findings from the Evaluate phase
- **How will the included elements be organized?**
  - Structure may be set from the Research phase
  - Organizational system should work well to help those using the blueprint understand the details of what is included
  - Consider implications for score reporting
- **How will the included elements be weighted?**
  - Allow experts to make this decisions using findings from the Evaluate phase

# Communication with stakeholders

- **Before the process**
  - Why
  - Who will be involved
  - What the process will be
- **During the process**
  - Ways to be involved
  - Updates on progress
- **After the process**
  - Major findings
  - Resulting changes to program







Looking forward

# Challenges to Face

- Professional Specialization: What is required for the general credential?
- Soft skills: Which are required for the credential versus helpful for success?
- Logistics: What is the value of meeting in person versus distributed work?





# Using Questionmark to Conduct Job Task Analysis Surveys

# JTA Surveys with Questionmark

## JTA-specific question type

- Create tasks
- Define dimensions and scales for each task

## Capture demographics to analyze responses by stakeholder characteristics

- Job role
- Location
- etc.

## JTA-specific reports

- Summary/overview of results
- Compare/contrast by demographics

# Job Task Analysis (JTA) Surveys: Participant View

1 of 4

Review and rate the **applicability**, **difficulty**, **importance** and **frequency** the following **tasks** performed by the **Food Service Manager** job role.

	Applicability			Difficulty						Importance						Frequency			
	Do Task	Supervise Task	N/A	Very Easy	Easy	Neither Easy or Difficult	Difficult	Very Difficult	N/A	Not Important	Somewhat Important	Important	Very Important	Extremely Important	N/A	Daily	Weekly	Monthly	Quarterly
Keep records required by government agencies regarding sanitation or food subsidies. ✓	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Investigate and resolve complaints regarding food quality, service, or accommodations. ✓	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain food and equipment inventories, and keep inventory records. ✓	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitor food preparation methods, portion sizes, and garnishing and presentation of food to ensure that food is prepared and presented in an acceptable manner. ✓	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schedule and receive food and beverage deliveries, checking delivery contents to verify product quality and quantity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey SMEs about key tasks

How Difficult?  
How Important?  
How Frequent?  
How Critical?

# Job Task Analysis (JTA) Surveys: Authoring

Home » Topics » Job task analysis

Topic: Job Task Analysis\Restaurant - Food Service\Food Service Managers

Question ID

100002507569

Revision ID

4091404

Add New Task

Import Tasks

Add New Dimension

Add comment box

Edit question properties

Notes

Save

Advanced

Exit

Spell check

Hide Dimensions

B I U X x [list icons]

Review and rate the applicability, difficulty, importance and frequency the following tasks performed by the Food Service Manager job role.

+	Keep records required by government agencies regarding sanitation or food	1	x
+	Investigate and resolve complaints regarding food quality, service, or accom	2	x
+	Maintain food and equipment inventories, and keep inventory records.	3	x
+	Monitor food preparation methods, portion sizes, and garnishing and prese	4	x
+	Schedule and receive food and beverage deliveries, checking delivery conf	5	x
+	Coordinate assignments of cooking personnel to ensure economical use of	6	x
+	Monitor compliance with health and fire regulations regarding food prepara	7	x
+	Count money and make bank deposits.	8	x
+	Establish standards for personnel performance and customer service.	9	x

Enter tasks,  
skills, etc.

Or import tasks via  
CSV file



# Capture demographics for analysis

- Demographic info can be saved to “special fields” in assessment results
  - 10 special fields available
- Options for capturing:
  - From user records
    - Field mappings defined in “Server Settings”

Special Field Settings	Value
S1	First_Name ▼
S2	Last_Name ▼
S3	Primary_Email ▼
S4	Organization_Name ▼
S5	Department ▼
S6	Manager_Name ▼
S7	Primary_City ▼
S8	Member_Sub_Group_1 ▼
S9	Details_15 ▼
S10	Details_16 ▼

- From questions (next slide)



# Designate questions to capture demographics

The screenshot displays the 'Question blocks' management interface. At the top, there's a 'Question blocks' header with '+Add' and 'Settings' options. Below it, a 'Question Block - 1' section contains an 'Introduction' text area and a 'Question selections' list. The 'Question selections' list is highlighted with a red dashed border and contains several single questions. A 'Demographics' dialog box is open, showing options to include question results as a special field in the answer database. The 'Use field' dropdown is set to 'Special\_7'. The 'Information to store' section has 'Answer' selected. A red callout points to the 'Question selections' list with the text 'Set as demographic question'. Another red callout points to the 'Special\_7' dropdown with the text 'Saves response to special field'.

Question blocks +Add Settings

Question Block - 1 +Add Settings Delete

Introduction ?  
Enter an introduction for this question block

Question selections

- Single question '100007238809 - Normal - Job role' from topic 'Job Task Analysis/Restaurant - Food Service/Food Service Managers' (1)
- Single question '100007239311 - Normal - Lo
- Single question '100002507569 - Normal - Ta
- Single question '100002507570 - Normal - Sk
- Single question '100002507571 - Normal - Sk
- Single question '100002507572 - Normal - Ab

**Demographics** ? x

☒ Include the question's results as a special field in the answer database

Use field  
Special\_7

Information to store  
☒ Answer ☐ Outcome

OK Cancel

Set as demographic question

Saves response to special field

# Job Task Analysis (JTA) Reports

## JTA summary report

Assessment name: JTA Medical Staff  
 Date report produced: 09 December 2014  
 Date of results: All dates  
 Filtered by groups: JTA Group  
 Ignore assessment revisions: No

[PDF](#)
[CSV](#)

Reference #	Task	Applicability			Difficulty			
		Do Task	Supervise Task	N/A	Very Easy	Easy	Neither Easy or Difficult	Difficult
N/A	Administering medication	97% (30)	3% (1)	0% (0)	26% (8)	32% (10)	13% (4)	10% (3)
N/A	Assessing patients	77% (24)	23% (7)	0% (0)	19% (6)	35% (11)	16% (5)	16% (5)
N/A	Assisting patient	71% (22)	29% (9)	0% (0)	29% (9)	23% (7)	16% (5)	26% (8)
N/A	Communicating with family members	87% (27)	13% (4)	0% (0)	29% (9)	16% (5)	6% (2)	35% (11)
N/A	Cleaning surgical area	74% (23)	26% (8)	0% (0)	19% (6)	39% (12)	13% (4)	16% (5)
N/A	Showing empathy	100% (31)	0% (0)	0% (0)	29% (9)	32% (10)	10% (3)	26% (8)
N/A	Checking patient temperature	87% (27)	13% (4)	0% (0)	37% (11)	30% (9)	10% (3)	17% (5)
N/A	Completing medical records	77% (24)	23% (7)	0% (0)	10% (3)	23% (7)	6% (2)	42% (13)
N/A	Communicating with doctors	97% (30)	3% (1)	0% (0)	10% (3)	19% (6)	16% (5)	35% (11)

Summary Report

Demographic Report

## JTA dimension by demographic report

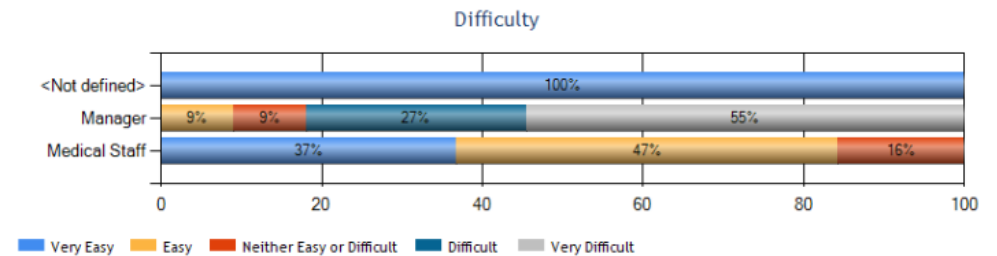
Assessment name: JTA Medical Staff  
 Date report produced: 09 December 2014  
 Date of results: All dates  
 Ignore assessment revisions: No

[PDF](#)
[CSV](#)

Reference #: N/A

Task: Administering medication

Dimension: Difficulty



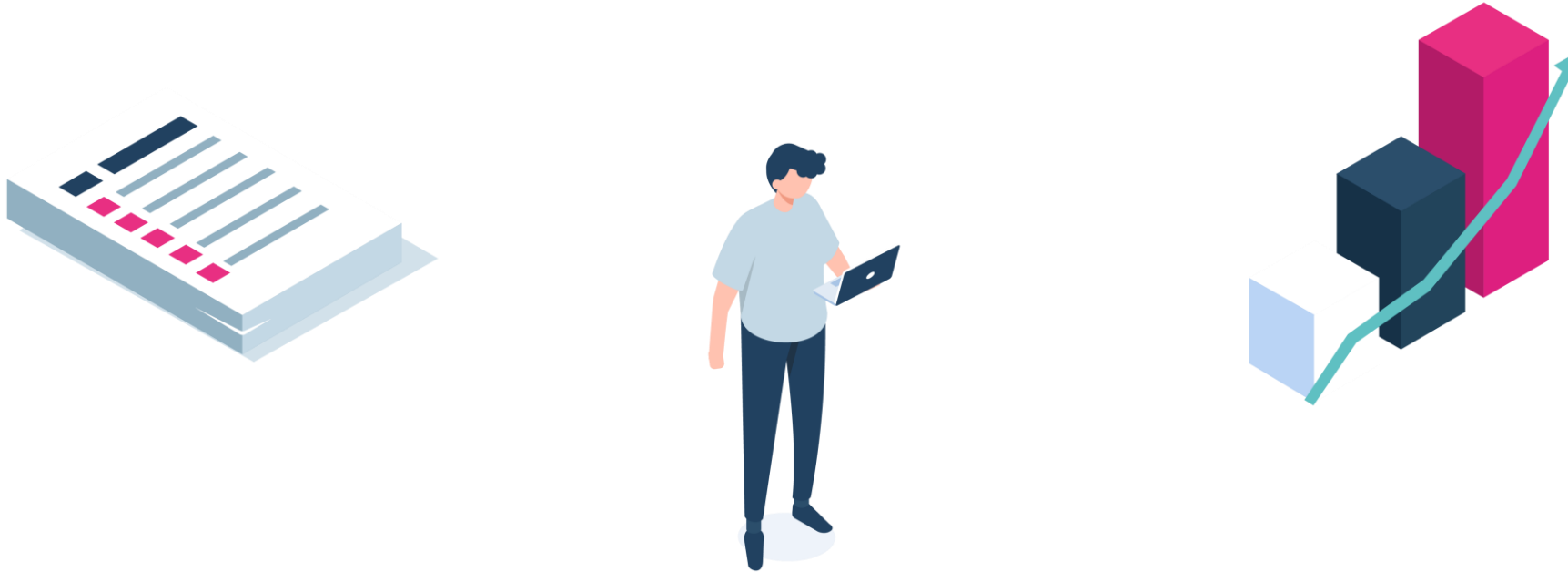
	Very Easy	Easy	Neither Easy or Difficult	Difficult	Very Difficult
<Not defined>	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)
Manager	0% (0)	9% (1)	9% (1)	27% (3)	55% (6)
Medical Staff	37% (7)	47% (9)	16% (3)	0% (0)	0% (0)

question  
mark

Your Questions?



# White Papers, Infographics, Reports, eBooks and More!



**Visit our resources page**  
**[www.questionmark.com/resources](http://www.questionmark.com/resources)**

# Upcoming Webinars



## Introduction to Questionmark's Assessment Platform

◆ July 29, 2021 - 10:00 am to 11:00 am (EDT)

Learn the basics of authoring, delivering and reporting on surveys, quizzes, tests and exams. This introductory webinar explains and demonstrates key Questionmark features and functions.

[Click to Register](#)

## Cyber-Enabled Workforce: What it Means & How to Ensure Your Company is Prepared

◆ August 11, 2021 - 12:00 pm to 1:00 pm (EDT)

Learn how to find that gap between the cybersecurity skills your employees have and those that they need. This session will cover how to build cyber culture within your organization and how assessments can help enhance your organization's security posture.

[Click to Register](#)

## Questionmark 2021 Q3 Feature Release Briefing

◆ August 12, 2021 - 11:00 am to 12:00 pm (EDT)

An in-depth look into your third quarter product feature release, this briefing is jam packed with key new features that will ensure you are delivering valid and reliable assessments.

[Click to Register](#)

## Test-Item Database Design – Your Key to Fairness

◆ August 26, 2021 - 11:00 am to 12:00 pm (EDT)

Learn the importance of the initial design of a test-item database. This session will cover how the initial design or layout of topics affects several outcomes down the line including locating test-items within the database, item selection for assessments, using reports to identify knowledge gaps, and decisions on how to score the examination.

[Click to Register](#)



# Get in touch

Susan Davis-Becker – [sdavisbecker@acsventures.com](mailto:sdavisbecker@acsventures.com)

Jaime Kavanaugh – [jkavanaugh@acsventures.com](mailto:jkavanaugh@acsventures.com)

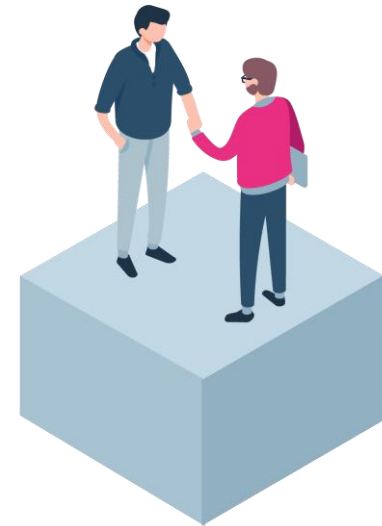
Brian McNamara – [brian@questionmark.com](mailto:brian@questionmark.com)

# How to Evaluate Questionmark

## Request a one-on-one demo

*The Questionmark team will contact you to arrange a demonstration tailored to your needs and questions*

**[www.questionmark.com/request-demo](http://www.questionmark.com/request-demo)**





# Thank you for attending!

*We hope to see you at a future webinar*

Keep up to date at [www.questionmark.com/resources/blog](http://www.questionmark.com/resources/blog)