



DONALD AND BARBARA
ZUCKER SCHOOL of MEDICINE
AT HOFSTRA/NORTHWELL



Just in Time Teaching (JiTT) Infographic Tools

**App Development to Support Technologically
Assisted Faculty Development**

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KEY FACTS

The largest integrated health system New York State



23 Hospitals

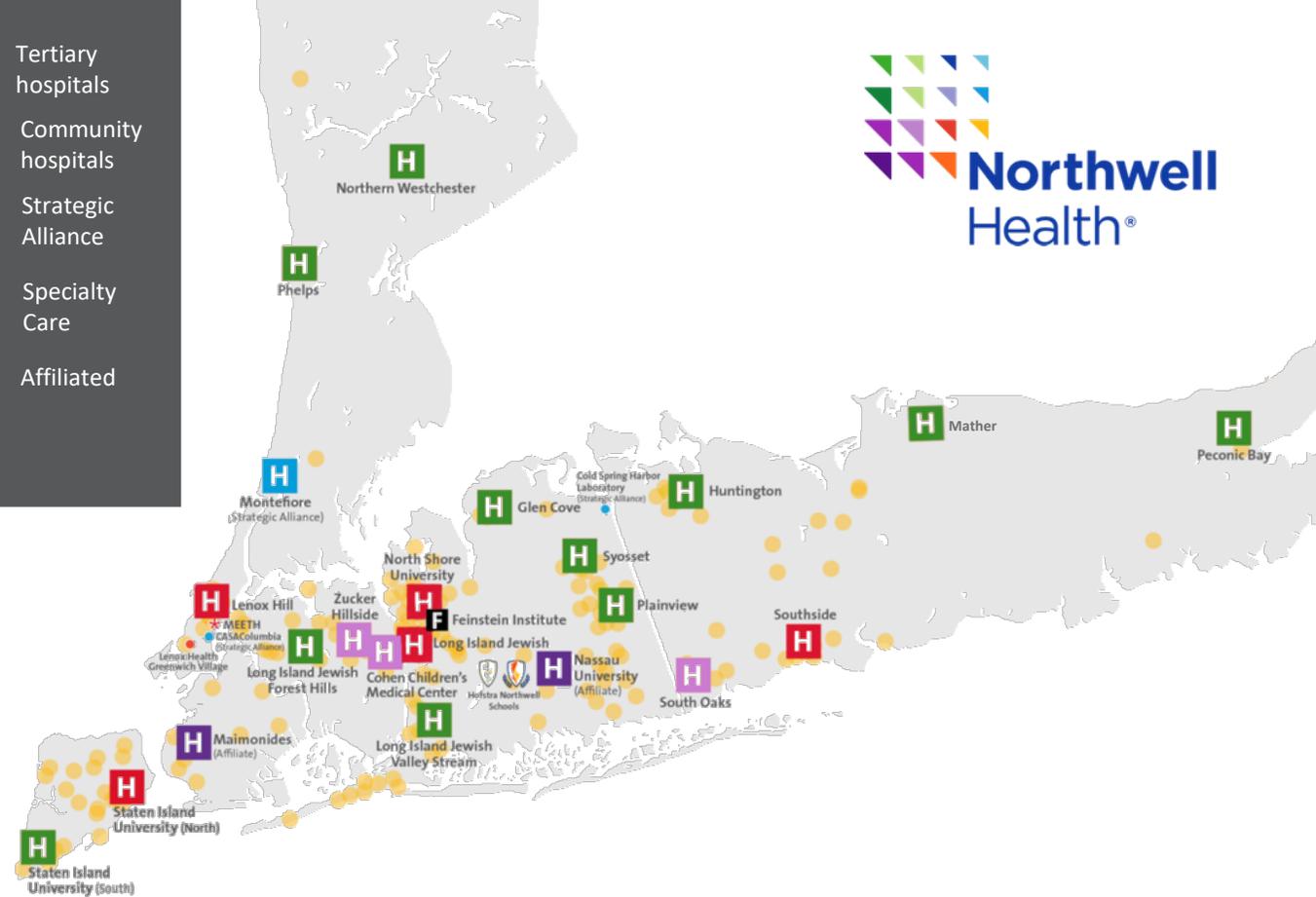
750+ Ambulatory facilities

~2,000 trainees and fellows



in 120 programs

- Tertiary hospitals
- Community hospitals
- Strategic Alliance
- Specialty Care
- Affiliated



Five tertiary hospitals

- Lenox Hill Hospital
 - Manhattan Eye, Ear & Throat Hospital
- Long Island Jewish Medical Center
- North Shore University Hospital
 - Sandra Atlas Bass Heart Hospital
- Southside Hospital
- Staten Island University Hospital, North

Three specialty care hospitals

- Cohen Children's Medical Center
- South Oak's Hospital
- Zucker Hillside Hospital

11 community hospitals

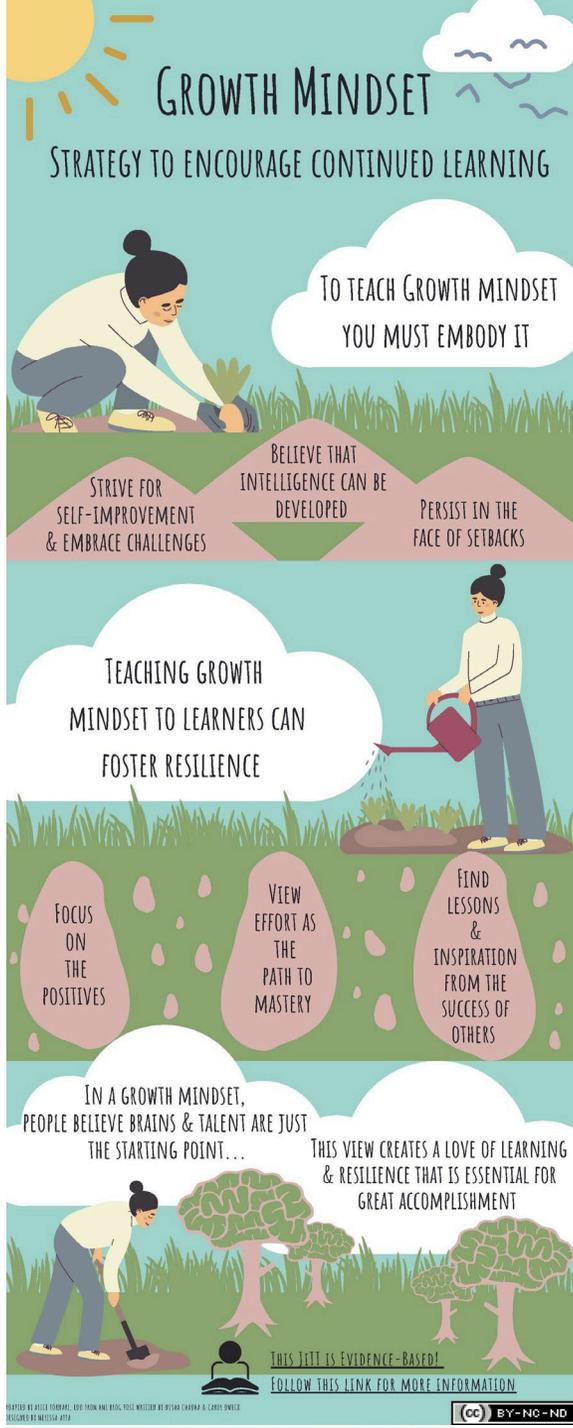
- Glen Cove Hospital
- Huntington Hospital
- Long Island Jewish Forest Hills
- Long Island Jewish Valley Stream
 - The Orthopedic Hospital
- Northern Westchester Hospital
- Mather Hospital
- Peconic Bay Medical Center
- Phelps Hospital
- Plainview Hospital
- Staten Island University Hospital, South
- Syosset Hospital

Four Affiliated hospitals

- Boca Raton Regional Hospital, FL
- Crouse Health , NY
- Maimonides Medical Center , NY
- Nassau University Medical Center, NY

Strategic alliances

- CASAColumbia, NY
- Cold Spring Harbor Laboratory, NY
- Epworth HealthCare, Richmond, Australia
- Karolinska Institute
- One Brooklyn Health
- OPKO Health BioReference Laboratories
- Rothman Institute
- University of Norte Dame
- Western Connecticut Health Network
- Yale New Haven Health



In reality, the learning environment is probably made up of many, many micro learning environments. To the learner within it, the environment may exist at his or her individual level, with the smallest microenvironment encompassing just one person, or one person plus his or her interaction with a single patient, peer or teacher.

Medical Education 2015: 49:
859–860
doi: 10.1111/medu.12736

Microlearning from Microteaching with Microcontent



- **Faculty Developers can Integrate learning concepts form the technology-enhanced learning filed to create new types of learning experiences (micro-learning, micro-credentialing, badging)**
- **The Learning Loop: Conceptualizing Just-in-Time Faculty Development**
- Yusuf Yilmaz PhD, Dimitrios Papanagnou MD, MPH, Alice Fornari EdD RDN, Teresa M. Chan MD FRCPC MHPE DRCPSC
- **First published: 11 January 2022**
<https://doi.org/10.1002/aet2.10722>

Top 4 Benefits of Microlearning for Millennials

Microlearning modules are 5 to 10 minute standalone modules each targeting a single or at the maximum, two learning objectives.

One at a time

These short learning modules deal with one learning objective at a time, thereby avoiding cognitive overload on the sales reps.



Short is engaging

Microlearning modules that come in bites, satisfy and engage learners as they are short and focused.



Just-in-time is the best

As sales reps are constantly on the go, these short learning modules offer just-in-time learning whenever and wherever required.



Performance support

Microlearning modules provide performance support to avoid the impact of the forgetting curve.



Just in Time (JiT) CE-PUPP Needs

JiTT Infographic App
Organized tagged
microcontent

Unperceived

Perceived

Faculty engage in “pulling” down content based on data-driven analytics and reporting.



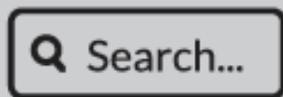
eg, Learning modules floated to a learner through artificial intelligence-based recommendation system linked to their annual patient-outcomes dashboard.

Direct “push” of content to individual learners who do not yet know they need this content.



eg, Targeted infographics emailed to faculty who are taking on new assessment roles (eg, competency-based medical education)

Learners can access and “pull” down the content they need when they detect their own need has not yet been met.



eg, Searching on a customized search engine for all open access continuing education resources (googleFOAM.com)

Faculty can subscribe to content in general areas of interest (eg, their specialty) and received customized “pushes” based on emerging trends within that domain.

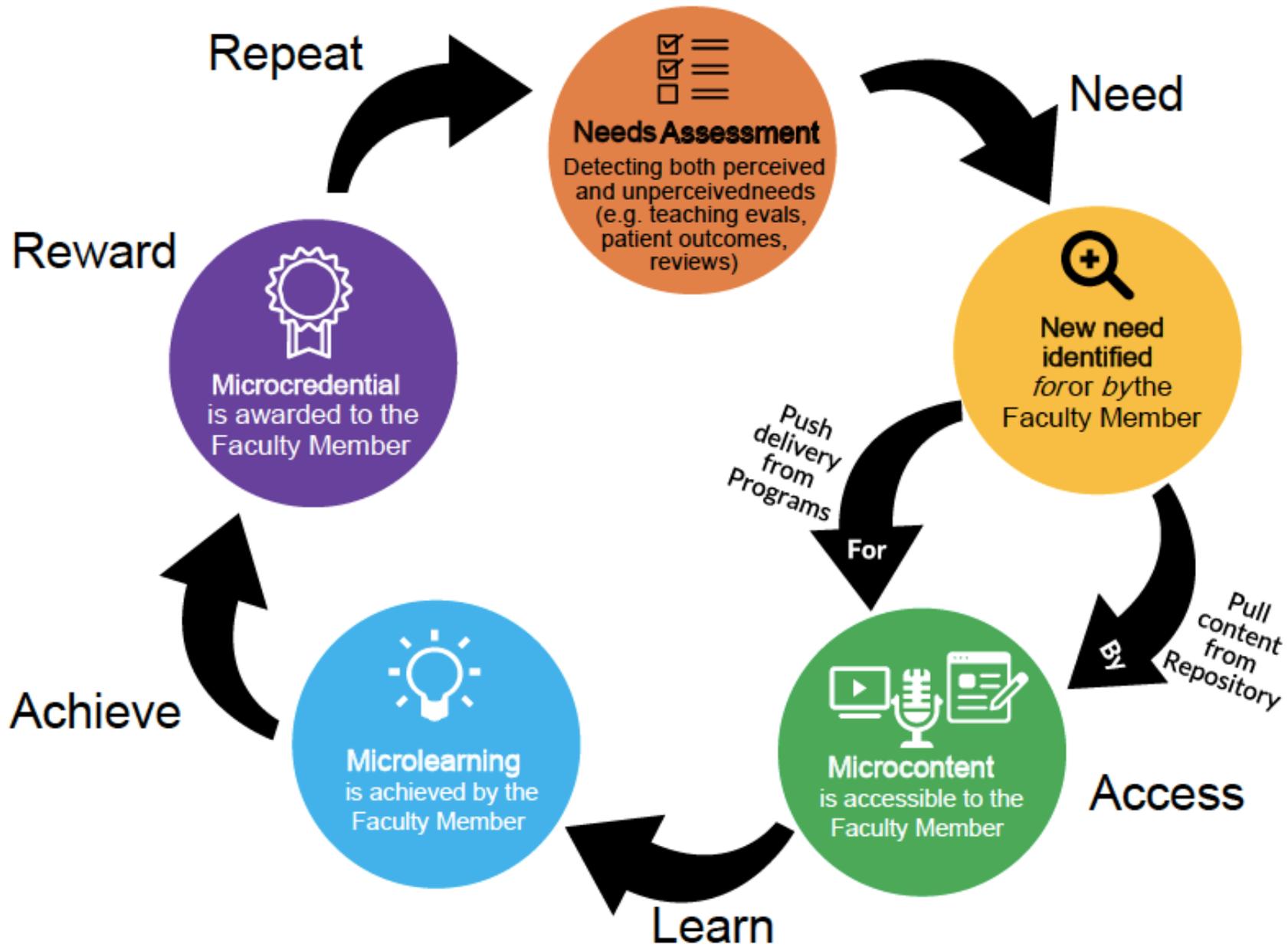


eg, Learners can subscribe to a specialty-specific email newsletter that provides recommendations to new and relevant literature.

Pull

Push

FIGURE 1. Perceived/unperceived push/pull taxonomy of just-in-time continuing education



Just in Time Learning Loop

4 Key Elements of Microlearning Module



4 Key Elements of a Microlearning Module



① →

Microlearning Objectives (MLO)

With specific titles and micro learning objectives, you can help distracted learners focus in time-compressed workplaces. You can also accurately index microlearning topics for future on-demand training.



② →

Microlearning Content (MLC)

Microlearning content (MLC) contains the core training information and activities. Try to focus on one key idea plus three supporting subtopics for each micro unit.



③ →

Microlearning Delivery (MLD)

Different content commands different formats of media. Infographics and videos are two of the most popular delivery methods. Infographics in particular can enhance appeal, comprehension and learning retention.



④ →

Microlearning Evaluation (MLE)

The ultimate goal for a microlearning unit is behavioral change. Activity, context and feedback are key for this purpose.



5 Features of Microlearning



The **characteristics** associated with online learning modules that make them truly **micro** are as follows:

- 1 Short Duration**
Microlearning modules are designed for learners who cannot spare more than a few minutes at a time for learning and skill development.
- 2 Focuses on a Single Learning Objective**
A single learning objective keeps the micro module focused on facilitating specific knowledge transfer.
- 3 Forms Part of a Whole, Being Independent**
Micro modules are standalone and can also be used in any course that might have the topic in its curriculum.
- 4 Interactive Elements**
Interactivity allows learners to apply what they've learned, which helps them commit information to their long-term memory.
- 5 Works on Multiple Devices**
Learners can access microlearning modules from multiple devices, irrespective of their location.



BACKGROUND

Trainees & faculty spend up to **25%** of time **teaching** medical students

Medical students **credit 1/3** of their **clinical knowledge** to teaching from trainees & faculty

Therefore many trainee programs considers teaching skills such as Resident as Teacher (RAT) a core competency

The ACGME has recently published ***New Clinician Educator Milestones*** to provide pathways for professional development and framework for assessment



Though many times trainees

feel unprepared

Unsure...

What to teach? And When and How to teach it?

WELCOME



The **JiTT Infographic App** supports clinical teachers & trainees with free open-access medical education (FOAM) resources. All JiTT's are evidence-based & accessible on mobile devices, delivered asynchronously as a FD strategy.

- 24 categories with 200+ JiTTs
- Key word search engine
- Save "favorites" & download JiTTs as PDF
- Continued Education (CE) unit accreditation
- Review questions
- Live analytic data to monitor outcomes

Use this **QR code** to download the App

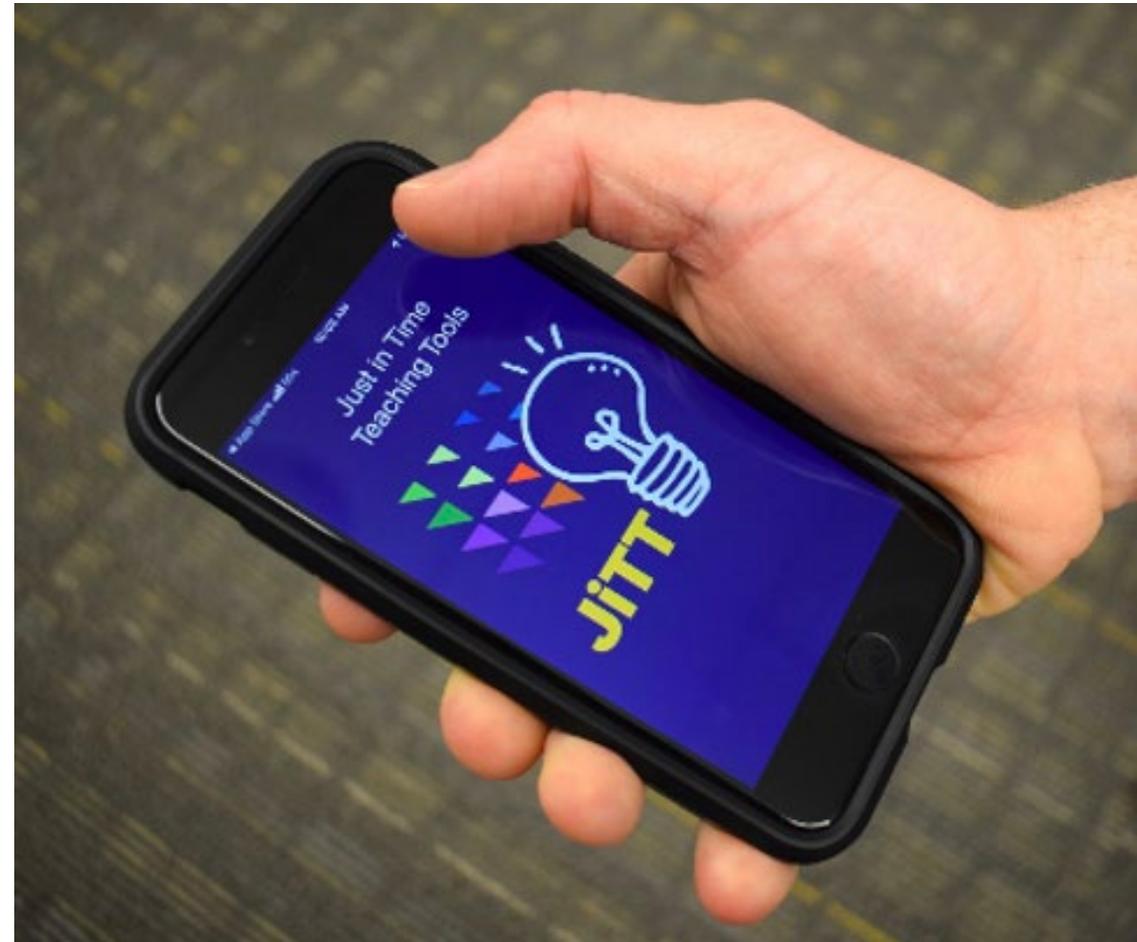
- Questions?
- Contact Alice Fornari,
• afornari@northwell.edu
- Follow on Twitter:
- [@afornari1](https://twitter.com/afornari1) & [@Jitt_Tools](https://twitter.com/Jitt_Tools)



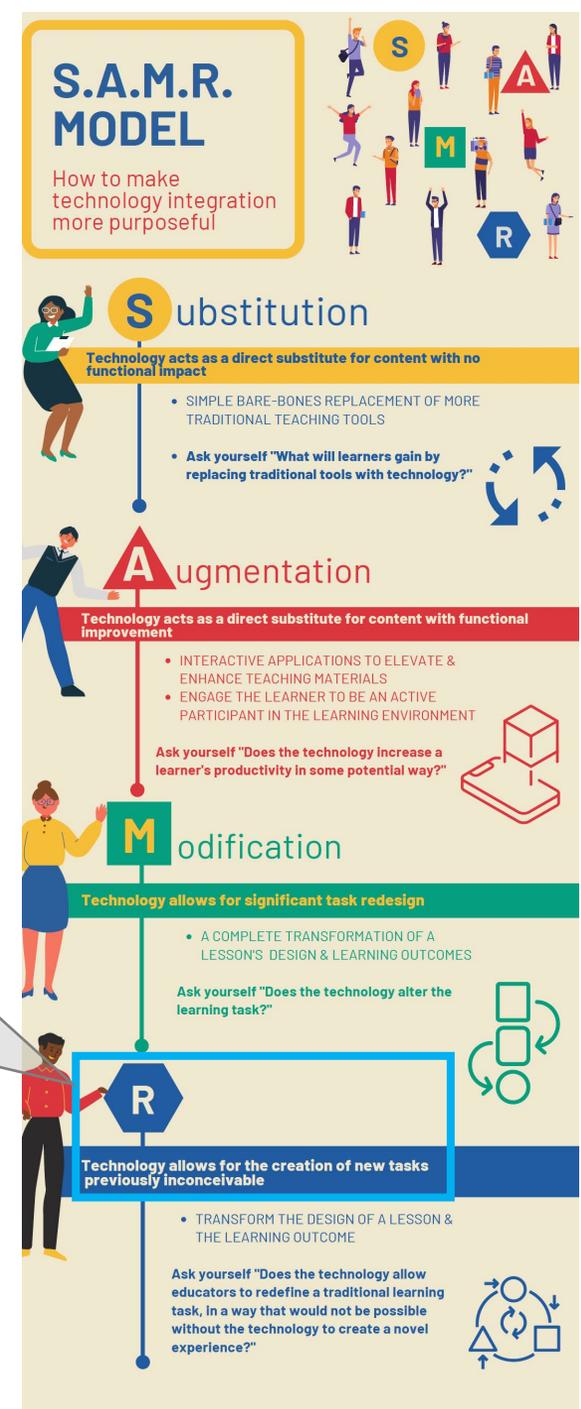
Available for FREE download on
both iOS and Android



JITT Infographics 12+
Tools for Medical Education
Northwell Health INC
★★★★★ 5.0 + 8 Ratings
Free



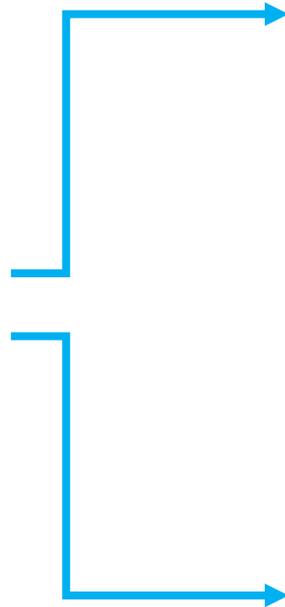
How to integrate technology in education using the S.A.M.R. Model



Why it matters?



Better Medical Education



Satisfaction with role
Professional identity
formation



Improvement of
Quality of Care



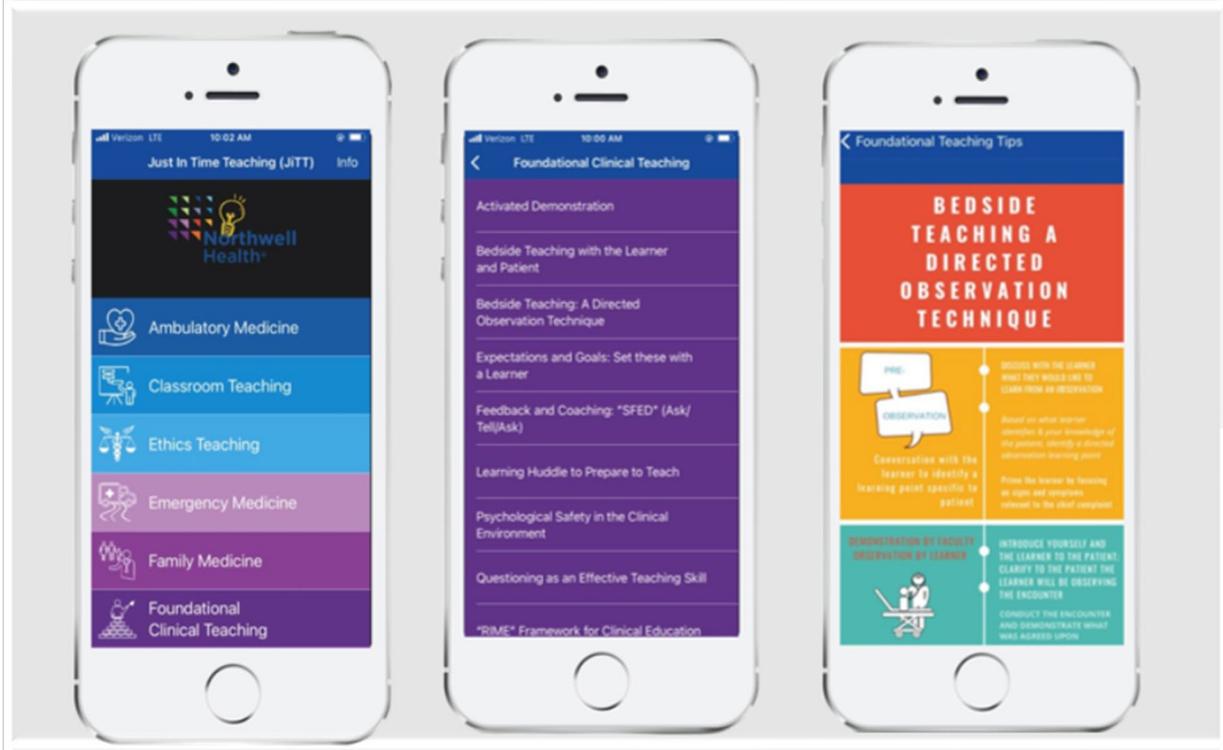
Medically



Productivity



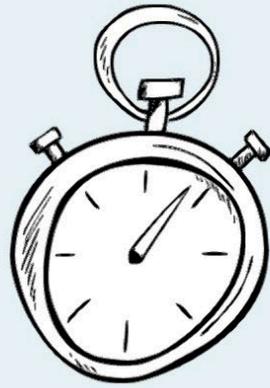
Social



For use in the following settings...

- Inpatient
- Outpatient
- Ambulatory
- Classroom
- Grand Rounds





**Just-in-Time
Teaching (JiTT)
Infographic Tools**



[How to use the JiTT App.](#)

Proposed Title of Graphic	
Subtitle tag line if any	
Content text and subtext (Can be broken down into teaching points)	
Indicate if the content is sequential (yes/no)	
Evidence based article citation	
Author Name, credentials, and Institution	
Author Email	
Collaborators Email	

JiTT Creation Guide

Submit this form to
Melissa Affa,

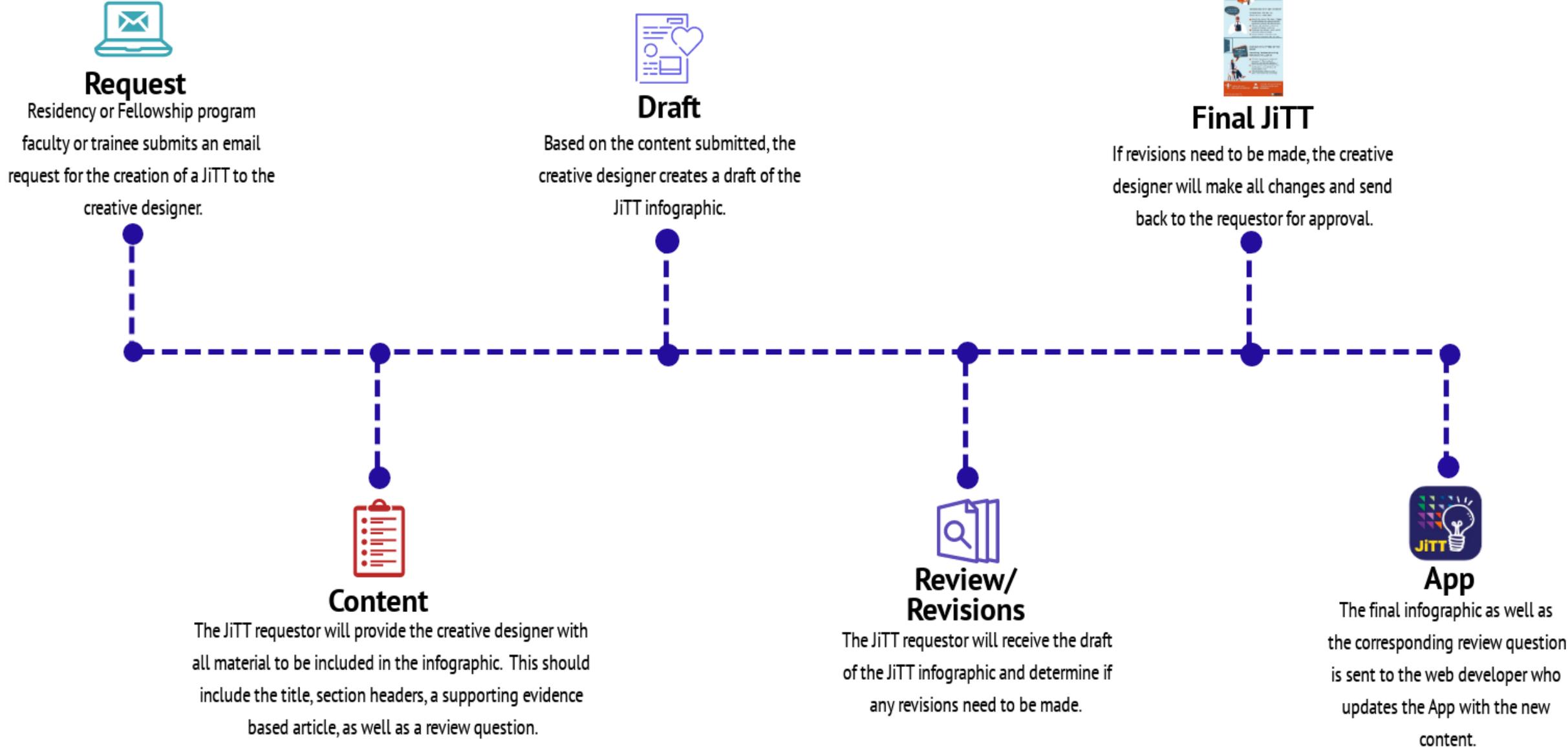
maffa@northwell.edu

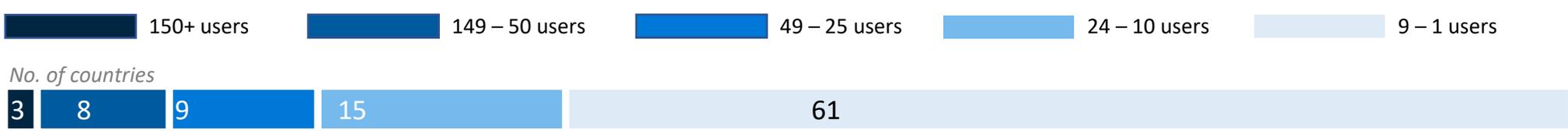
**Reminder: A focus on
teaching the content
NOT how to delivering
the actual content*

Questions? Please
contact Alice Fornari
afornari@northwell.edu

JiTT Timeline

From request to the App





4,909

of users downloaded the app

3,763 (76.7%)

of active users

(defined as opening ≥ 1 JiTT)

96

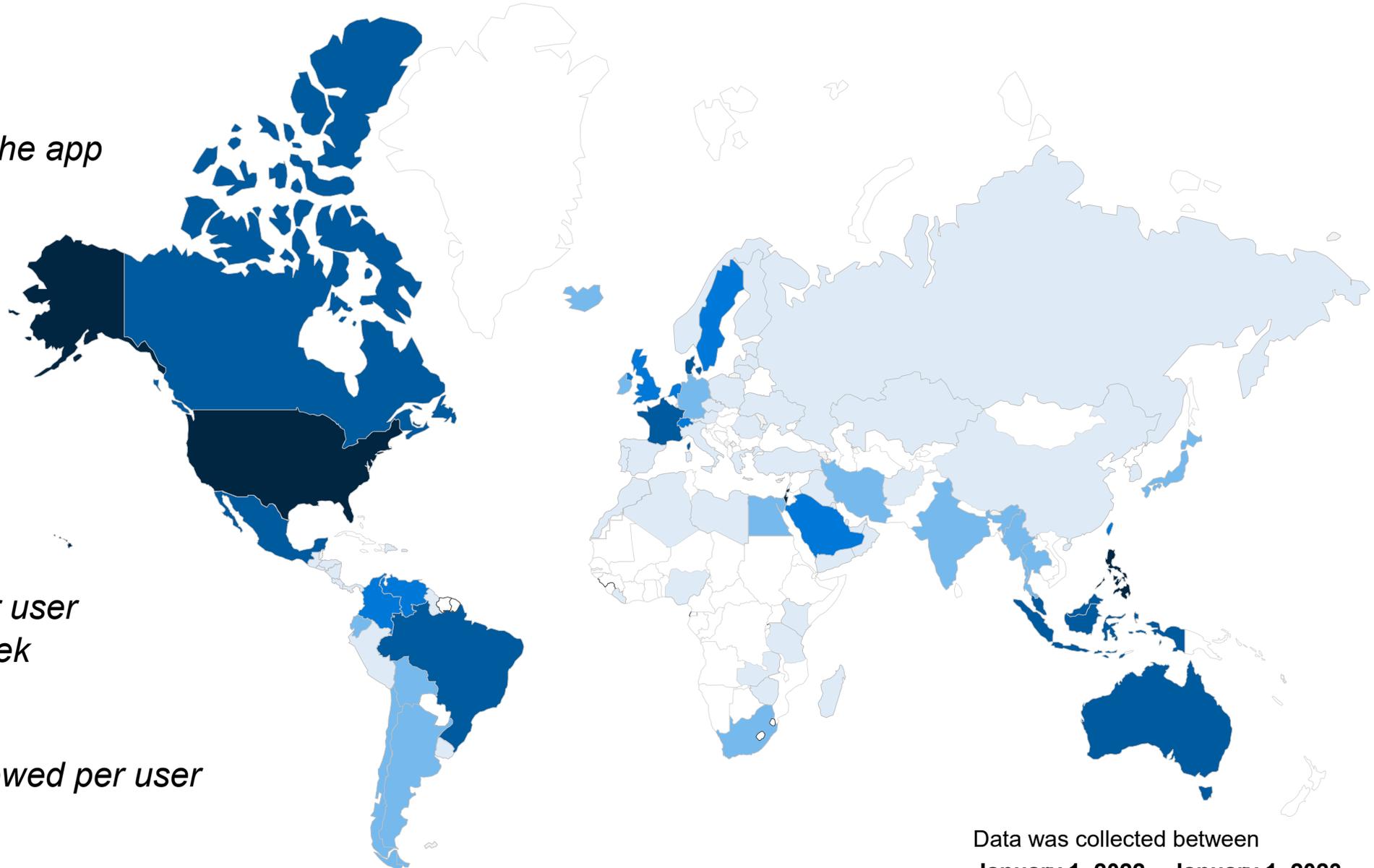
of countries

5.5 minutes

Average time spent per user reviewing JiTTs per week

6.7

Average # of JiTTs reviewed per user per week



Data was collected between
January 1, 2022 – January 1, 2023

Top 5 Most Viewed Categories on the App

by the 3,763 active users from January 1, 2022 until January 1, 2023



Top 10 JiTTs viewed on the App

by the 3,763 active users from January 1, 2022 until January 1, 2023



Feedback

- Continuing Education Unit (CEU) Users n= 10



Narrative feedback from survey respondents



“I really like the infographics etc. Some of these are exactly what we teach but love this type of technology.”



“Overall, an easy-to-use app, with a wealth of information, presented with admirably clear text and info graphics. I have recommended this to both junior and senior educator colleagues who have found it useful too. Thanks for making this app!”



“The fact that these are succinct are excellent and makes it digestible and reviewable multiple times to learn simple facts before teaching. Thank you!”

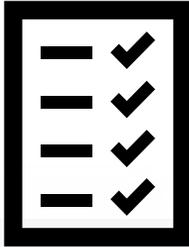


“JITT is a great idea and user friendly! I plan to use it for brief FD moments during departmental chiefs meetings and other faculty meetings.”



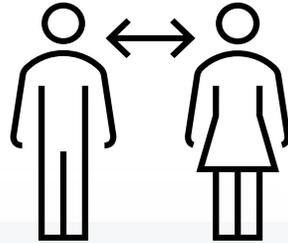
“I learned about JITT today and am absolutely amazed. Already had 3 friends download the app today and have recommended it to many more. Thank you!”

Next Steps



Whats New?

- 4 Additional Categories
 - Assessment
 - Communications
 - Palliative Care
 - Radiology
- *Internal Search Engine
- Powtoon Videos



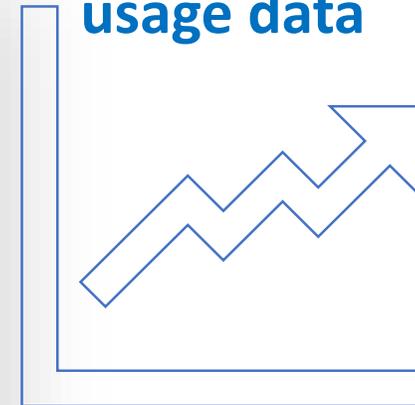
Collaborate to add more JiTT infographics

Our next update will house 200 JiTT infographics!



Improve user comprehension & application with instructional videos

Focus data collection on learner comprehension of JiTT content vs. usage data



*46 Active users used the search feature since its implementation on Jan 30, 2023 until March 1, 2023, with users searching an average of 4 times per week.



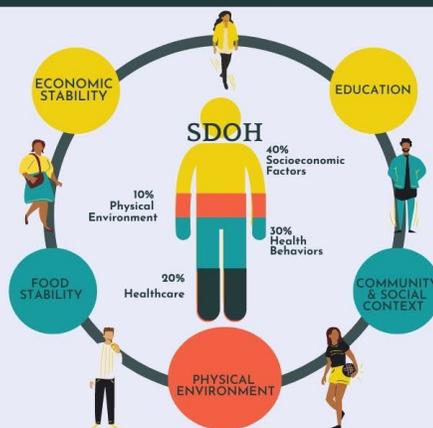


Domains of Social Determinants of Health

Scenario: There is a patient in the Emergency Room seeking care. They have not seen a doctor and are presenting with flu-like symptoms. Upon talking to the patient, you realize that the learner did not take a comprehensive social history on the patient. Using the Domains of Social Determinants of Health JiTT, you walk the learner through the five domains of Social Determinants of Health.

Domains of Social Determinants of Health PowToon

DOMAINS OF SOCIAL DETERMINANTS OF HEALTH



Studies suggest that 80-90% of health is determined by a person's social determinants of health, only 10-20% is accounted for by medical care. These social determinants can be categorized by the following domains.

ECONOMIC STABILITY	PHYSICAL ENVIRONMENT
<ul style="list-style-type: none"> Employment Debt Income Insurance Expenses Medical Bills 	<ul style="list-style-type: none"> Housing Transportation Safety Parks Walkability

FOOD STABILITY	EDUCATION
<ul style="list-style-type: none"> Hunger Access to Healthy Food Options 	<ul style="list-style-type: none"> Language Higher Education Literacy Early Childhood Education

Community & Social Context	SDOH Teaching Points to Reinforce with a Learner
<ul style="list-style-type: none"> Social Integration Community Engagement Discrimination Stress 	<ul style="list-style-type: none"> SDOH should be a part of an expanded patient's social history SDOH domains should be considered in the patient's management, treatment & discharge plan <p>This JiTT is evidence-based. Follow this link for more information.</p>

SOCIAL DETERMINANTS OF HEALTH:

The 5 Microskills or LANES to Precept



#1 TELL & COMMIT

- Tell me about the patient you just saw
- What specifically about The patient's social circumstance has affected their health?

#2 PROBE & PROVIDE

- What questions did you ask as part of your social history that supports your diagnosis?
- What can we do to help?

#3 TEACH

- Find a Teaching point using SDOH and the patients' presenting illness
 - Acknowledge: "Have we considered the Patient's uninsured status?"
 - Empathize: "Do you think the patient may be frustrated about unsafe conditions to exercise in their neighborhood?"
 - Activation: find SDOH services specific to patient's needs
 - Engagement: have a social worker come in to discuss eligibility of medicaid/plans

#4 REINFORCE

- Start with the Social questions to create a treatment plan, given what we know about the SDOH and Health of the patient

#5 FILL IN THE GAPS

- Using the SDOH consider housing and food insecurities and ask what more we can do to help the patient

LANES

Guiding the SDoH Conversation with Learners

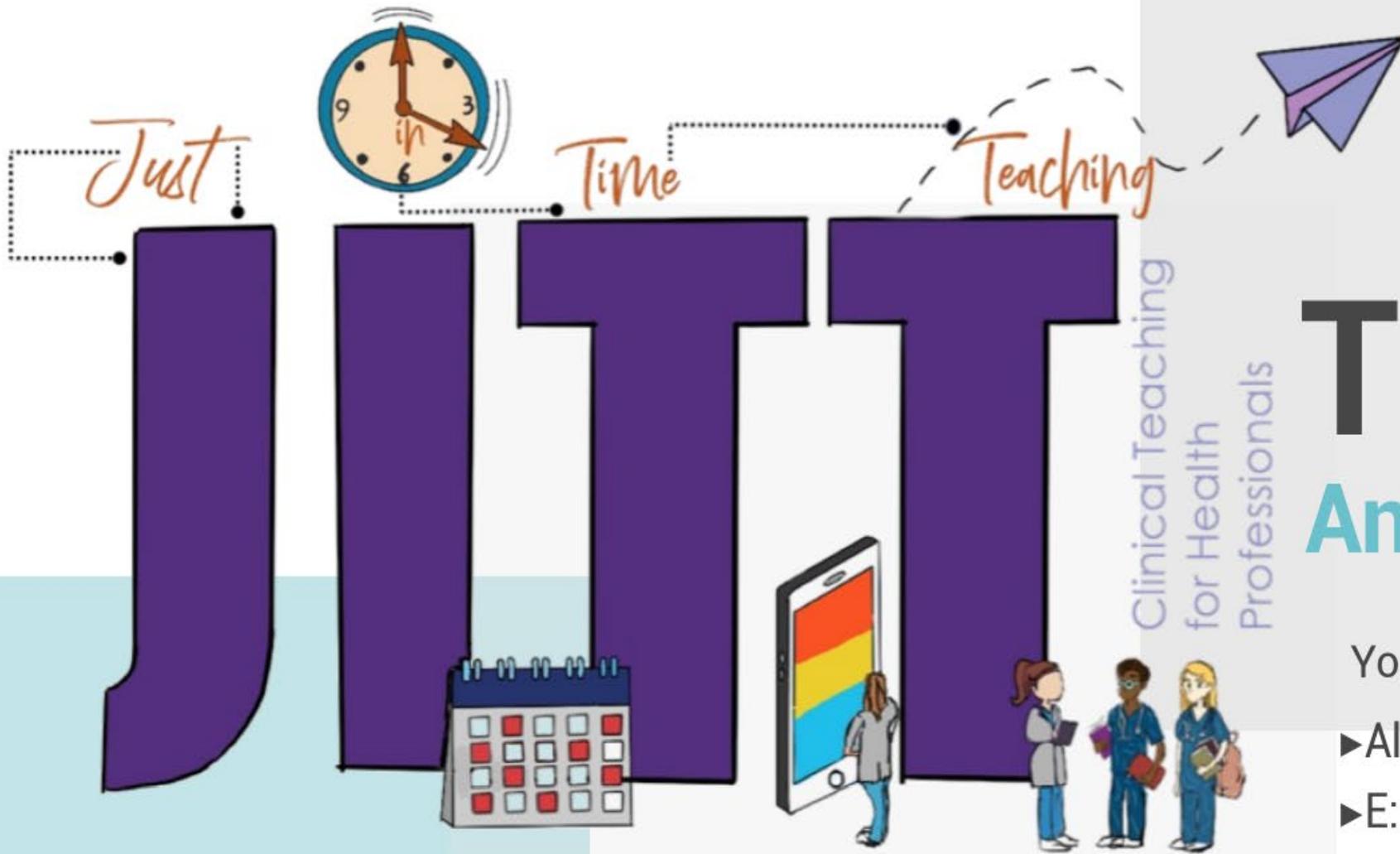
(L) Link the patient's social needs to the visit or health issue

(A) Assess the patient's knowledge of social need and impact on health

(N) Normalize the social need by providing community context & related stats

(E) Educate the patient on the connection to health

(S) Share information on resources



Thanks!

Any questions?

You can find me at:

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