



# **LITERATURE REVIEW**

**CATHY VOGEL  
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# AREAS OF FOCUS

- Patient Activation
- Technology
- Incentives

# METHODS

## PubMed.gov

- Patient activation
  - (diabetes AND self management AND "patient activation")
  - (self management) AND ("Patient Participation"[Mesh] OR "patient activation" OR "motivation for change") AND hypertension
- Technology
  - ("Mobile Applications"[Mesh] OR "Cell Phone"[Mesh] OR "Telemedicine"[Mesh] OR "Computers, Handheld"[Mesh]) AND ("Self-Management"[Mesh] AND program) AND ("Hypertension"[Mesh] OR "Diabetes Mellitus"[Mesh])
- Incentives
  - reward AND (diabetes OR hypertension) AND self management

# 209 Articles (136 Reviewed)

- Patient Activation – 136 (93)
  - Diabetes 85 (65)
  - Hypertension 51 (28)
- Technology – 24 (24)
- Incentives – 49 (19)

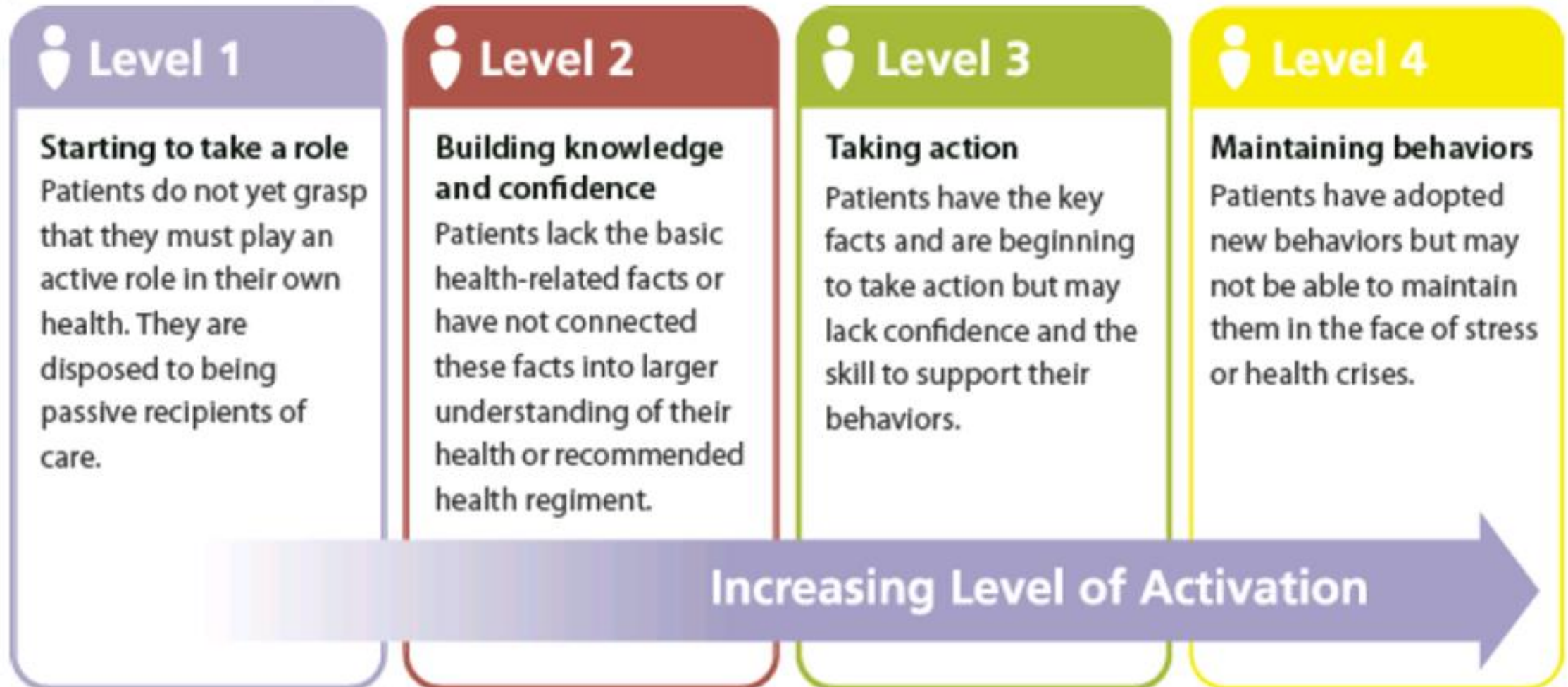
# **PATIENT ACTIVATION MEASURE (PAM)**

# DEFINITION

- Assessment of self-reported knowledge, skills and confidence for self-management irrespective of the underlying chronic condition

Although often used interchangeably with motivation or readiness to engage in self-management programming the Patient Activation Measure (PAM) is actually a product which assesses an individual's knowledge, skill, and confidence for managing one's health and healthcare.

# LEVELS OF ACTIVATION




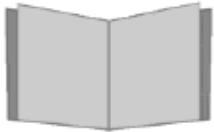


Source: J.Hibbard, University of Oregon

Name: \_\_\_\_\_

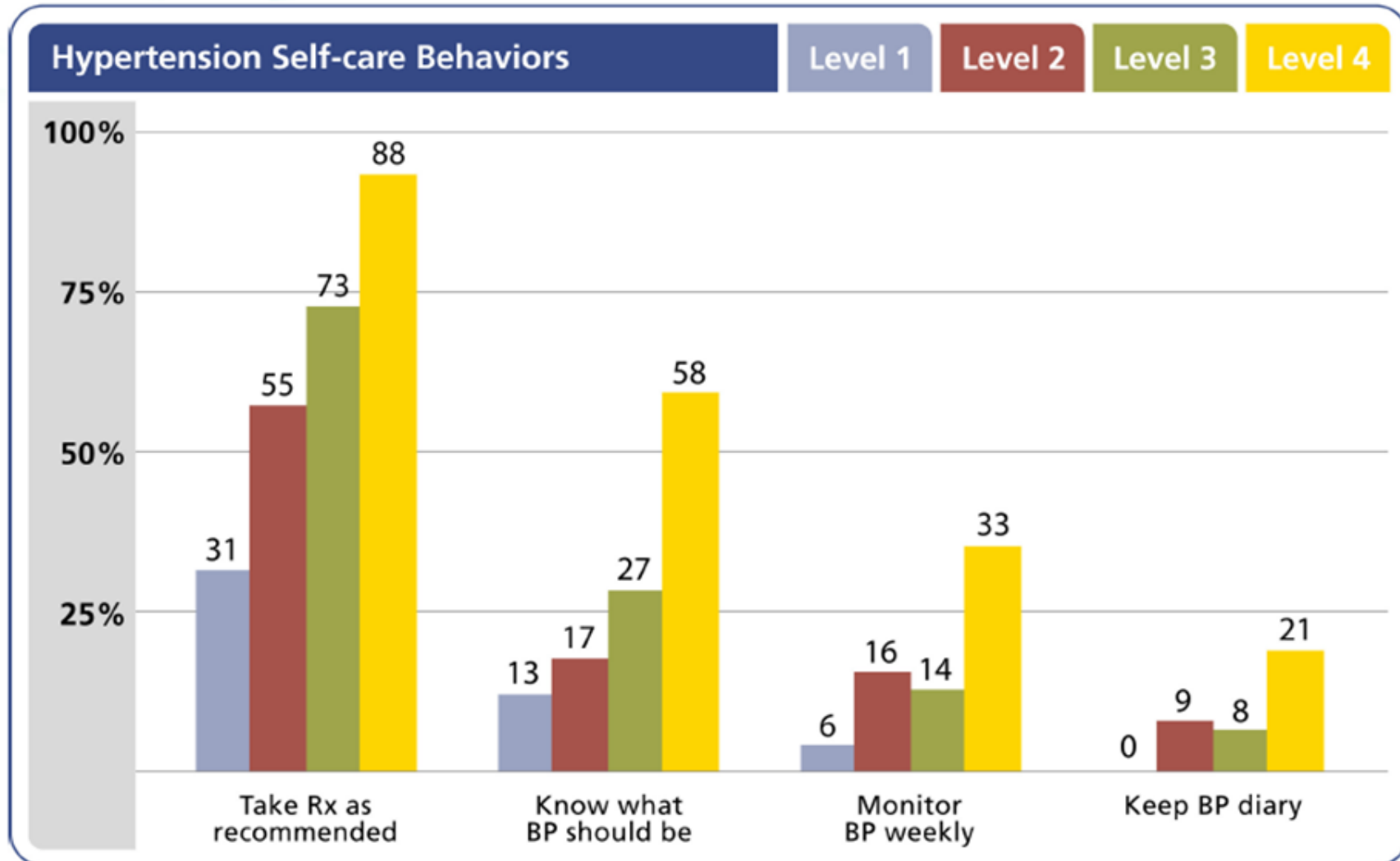
### Patient Activation Assessment

Level of Performance (Please rate: 1 point each)

				
<b>Medication Management</b>	<b>Red Flags</b>	<b>Medical Care Follow Up</b>	<b>Personal Health Record (PHR)</b>	<b>Comments</b>
<ul style="list-style-type: none"> <li>___ Demonstrates effective use of Medication Management System (medication organizer, flow chart, etc.)</li> <li>___ For each medication, understands the purpose, when and how to take, and possible side effects</li> <li>___ Demonstrates ability to accurately update medication list</li> <li>___ Agrees to confirm medication list with PCP and/or Specialist</li> </ul>	<ul style="list-style-type: none"> <li>___ Demonstrates understanding of Red Flags, or warning signs that condition may be worsening</li> <li>___ Reacts appropriately to Red Flags per education given (or understands how to react appropriately)</li> </ul>	<ul style="list-style-type: none"> <li>___ Can schedule and follow through on appointment(s).</li> <li>___ Writes a list of questions for PCP and/or specialist and brings to appointment</li> </ul>	<ul style="list-style-type: none"> <li>___ Understands the purpose of PHR and the importance of updating PHR</li> <li>___ Agrees to bring PHR to every health encounter</li> </ul>	
<b>Sum:     /4</b>	<b>Sum:     /2</b>	<b>Sum:     /2</b>	<b>Sum:     /2</b>	
<b>Total Score:     /10</b>				



# Level of activation is linked with each behavior



Source: US National sample 2004

# PATIENT ACTIVATION MEASURE - PAM

- Only validated, evidence-based tailoring tool
- More related to disease specific knowledge than other health behaviors and outcomes
- Vital sign that can be used to tailor care
- Difficult to measure

# PATIENT ACTIVATION IS COMPLEX

- Age
- BMI
- Education Level
- Financial Distress
- Physical Health Status
- Depression
- Social Support
- Living Alone
- Disease Duration
- Illness perception

# PATIENT ACTIVATION INTERVENTIONS

## - PAI

- engage patients in care by promoting increased knowledge, confidence, and/or skills for disease self-management
- Examples:
  - Psych-based counseling and Motivational Interviewing
  - Audit and feedback
  - Individualized care plans
  - Skill building and problem solving skills
- modestly improve A1c in adults with DM2
- No one strategy had a significantly larger impact on A1c
- integrate the most efficient and least expensive interventions

# PAI MODALITIES

- In person
- Telephone calls
- Digital – text, remote learning, information platforms, patient portal, etc
- Family or Peer Support
- **Combination**

# PERSONALIZED APPROACH

- Health Literacy
- Tailored Goals/Action Plans
- Problem Solving Skills
- Depressive symptoms
- Hearing impairment levels

# **TECHNOLOGY**

# MODALITIES

- Tailored online learning paths
- Texting
- Apps
- Online programming
- Patient portals
- Secure web platform
- Telephone



# PROS

- Promising resource
- Smartphones and other personal electronic devices widely used
- Standardizes care yet allows for personal tailoring
- Scalable
- Sustainable
- Cost effective
- Asynchronous

# CONS

- Internet quality/availability varies geographically
- Varying levels of user comfort
- Online education/information alone is insufficient to effect behavioral change

# NOTES

- Combined with standard medical care
- More simple an intervention adherence more likely
- Provides focused psychological support to motivate and enable diabetes self-care

# TAILORED ONLINE LEARNING PATHS

- Develop from patient interviews about shared values and health assumptions
- Tailor knowledge and skills necessary for self-care and guide selection of the self-management tools for a particular audience
- Condition specific
- High user satisfaction
- Increased levels of activation

# TEXTING

- Unidirectional
- Provide information, support, motivation, and reminders related to diabetes self-management and lifestyle
- Messages delivered by automated content management system
- Demonstrated significant improvement in hemoglobin A1c
- High patient satisfaction, usability, and patient-reported improvement in lifestyle measures such as diet and exercise habits

# TEXTING EXAMPLE

## Automated HTN Self-Management System

- Automated texting intervention to support blood pressure self-monitoring and patient self-management
- Increased sense of importance of BP monitoring, medication adherence, a healthy diet, regular exercise and stress management

# APPS

- Some studies show poor retention
- Built in incentives – i.e. reward points, may combat low retention
- Lack of human communication may mean less motivation to continue
- Intervention by staff (encouraging phone call) improves retention but increases cost

# ONLINE PROGRAMING

- DSM/DPP or other Standard Curriculum
- Many studies showed no significant differences in outcomes between in-person, secure messaging and telephone
- Higher health literacy associated with higher patient activation
- MI Techniques and Focus on Unique Needs
- Easy to underestimate time and budget required



# PATIENT PORTALS

- Patients with diabetes were significantly more likely to believe that having access to and reading their notes would help them take their medication better and take better care of themselves

# SECURE WEB PLATFORM

- Health resources
- Facilitated discussion forums
- Unique combination of autonomy and connection to a peer group was highly valued

# TELEPHONE

- Health Coaching
- One-on-one
- Usually supplemental to online

# **INCENTIVES**

# ROLE OF INCENTIVES

Incentives have two main roles:

- Guide the learning phase during the creation of habits
- Serve as an acknowledgement of efforts made in the stable phase

# NOTES

- Research ongoing and not aligned
- Most effective - help participants overcome barriers to active participation and reinforce behavior change
- Undesired consequence of decreased intrinsic motivation

# EXAMPLES

- Endorsed by CDC:
  - Food Vouchers
  - Transportation
  - Gym Memberships
  - Insurance Premium Discounts
- Others:
  - Cash
  - Gift cards to stores

# FUNDING INCENTIVES

- Dependent on insurance provider and delivery organization
- Community Contributions



# THANK YOU

Cell 802-495-9865

[cathy.vogel@onecarevt.org](mailto:cathy.vogel@onecarevt.org)