GRAND-AIDES: LEVERAGING THE HEALTH CARE WORKFORCE

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Physician and nurse shortage?
  ✤ Yes
  ✤ Especially geographically

As large a shortage as everyone says?
  ✤ No

Not the right question
  ✤ The issue is access to appropriate care
PHYSICIAN WORKFORCE TRENDS

DEMAND

- Baby Boomers: 10,000 per day on Medicare
- More patients alive with chronic disease
- Aging will need both specialists and generalists
- New specialties will emerge
  - e.g. ___ Genetics
- Affordable Care Act
  - 25 million
PHYSICIAN WORKFORCE TRENDS

**SUPPLY**

- Medical school supply higher
  - 16,888 new positions in past 10 years
- Medicare-funded GME positions flat
- Physician retirement
  - 2 years later = 30,000 physicians
- Lifestyle
  - Women and men
  - 80 hours
- Worsening geographic maldistribution
  - 57 million (20%) in HPSA (<1 PCP/3,500)
PROJECTED U.S. SHORTAGES

Physicians
- Projected 10 years 100,000 shortage
  - Both primary and specialty care (50/50)
  - Would require every school to double the number of graduates for 4 years
  - AAMC suggested 30% increase in graduates; new schools

Nurses
- Projected 10 years 300,000 to 1 million
  - Would require every school to double graduates for 4.3-14.0 years
  - AACN suggested 30% increase in nursing professors
1. Reduce demand
   a. Physician-induced
      i. Cardiologists: need 15% less cardiologists if paid differently
   b. Patient-induced: make the patient part of the team
      i. Colds to the ED
      ii. Not following instructions – medication adherence
      iii. “Must have that test or that drug”
2. Increase supply
   a. Modest increase in physicians and nurses possible
   b. Leverage the workforce
      i. Integrated systems
         i. Teams
         i. Re-define roles
      ii. EHR’S
Any reasonable increase in the number of physicians and nurses will not solve the problem with access to care.

A new model of health care delivery is required leveraging all of the health care workforce up one notch permitting professionals to do what they uniquely contribute to better health.
Teams

“Ideal”
- Removes silos
- Appropriate care by the appropriate team member
  - Leverage each member of the team from patients through specialists
- Improves effectiveness and lowers cost

“Actual”
- Silos difficult to remove
  - Organized (ie State Boards)
- Physicians still see themselves at the top of any pyramid
- Payment methodology will help
- Must demonstrate improved effectiveness and lower cost
  - Cannot be assumed
NEW MODEL OF HEALTH CARE DELIVERY

Health care team in integrated system

- Leverage to highest capability
  - Patient
  - Grand-Aide
    - Nurse extender
  - Community Health Worker
    - Social work extender
  - Generalist nurses, APRN, PA and physician
  - Specialist nurses, APRN, PA and physician
The Grand-Aides Concept

Grand-Aides is an innovative health care delivery program with caring, experienced nurse extenders making home visits to develop a trusting relationship, using portable telemedicine with established protocols connecting the patient and care team quickly and cost-effectively.

- Leverage: 5 Grand-Aides to 1 nurse supervisor
- Adaptable to fit into current team-based systems of care
  - Care managers

Goal: Improve health and provide appropriate access to care while reducing unnecessary emergency, clinic and hospital visits, thus reducing costs.

- 25-50% reduction in
  - Unneeded ED and primary care visits
  - Hospital readmissions
A GRAND-AIDE

- A Grand-Aide is an individual with some prior medical training (e.g. Certified Nurse Aide) who has been trained with a standard curriculum to support nurses in a variety of roles in chronic disease, primary care and prevention.
  - Characteristics of a “good grandparent”
    - TOUGH LOVE

- A Grand-Aide
  - Does not make decisions
  - A grand-Aide cares for 75-250 patients depending upon the population

- A Grand-Aide is paid at the rate of a CNA.
TYPES OF GRAND-AIDES PROGRAMS

ADULTS AND CHILDREN

- Transitional/Chronic Care
  - CHF, AMI, CABG, PCI
  - Pneumonia, COPD
  - Diabetes
  - Delirium
  - Asthma
  - Children with medically complex conditions
  - Others

- Palliative Care

- Populations
  - Medicare
  - Dual eligibles
  - New adult Medicaid expansion

- Primary Care
  - Emergency Department “hyper-utilizers”
  - Prevention (Hypertension, Diabetes, Obesity)

- Maternal-infant Care
**TRANSITION-CHRONIC GRAND-AIDES**

**WHAT THEY DO**

**During Patient Hospitalization**

**Frequency of Visit**
Supervisor visits patient and patient’s family prior to discharge

**What They Do**
Build initial patient relationship and explain process; permit if required

**Patient’s First Week Post Discharge**

**Frequency of Visits**
- Home visit conducted within 24 hours of discharge
- 3 or more visits for first week

**What They Do**
- Medication reconciliation
  - Complete patient questionnaire and report symptoms to supervisor
  - Portable telemedicine
  - Develop medication adherence plan
  - Diet, nutrition counseling

**Continued Support**

**Frequency of Visits**
Visits conducted as recommended by supervisor (2/week, etc.)
- 1/mo after first month

**What They Do**
- Continue to monitor medication adherence and patient symptoms
- Rapid access to medical team
Reinforce the proper use of technology

- Monitoring equipment
  - Grand-Aides learn to be first-level trouble-shooters of technology

- Computer data entry

Grand-Aides can become the extenders for a dedicated monitoring center
## GRAND-AIDES TOPS PUBLISHED RESULTS
### IN % REDUCTION IN READMISSION

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X = Reduction in readmission in this range past 5 years reported in one paper
Grand-Aides and Heart Failure readmissions

- University of Virginia (Health Affairs, October, 2014)
  - Class III-IV, Discharged home; 60 miles; Not Home Health
  - CHF all-cause readmissions – 58% reduction
    - After Grand-Aides 8.1%
    - Before 18.6%
  - Medication adherence 91% at 30 days

- Temple University (randomized)
  - 62% reduction in readmission

- George Washington University
  - 68% reduction (14% to 4.5%)
DELIRIUM
GRAND-AIDES
(HoustonMethodist CMMI grant)

- Reduce readmission in patients with delirium
- Assess patient every day Grand-Aide in the home
  - MiniCog (Clock Draw and 3-word recall)
  - Other chronic disease
- Teaching
  - Addressing delirium: e.g. sleep, day-night, meds, orientation
  - Management: e.g. sundowning, paranoia, troubling behavior, showers
  - Nutrition
  - Home safety
    - Falls
- Caregiver assessment and instructions from supervisor
  - Stress, capability
Provide support connecting the patient / family and the medical care team.

Use protocols specifically developed for palliative and hospice care.

Examples of Palliative Care Protocols

- Increased pain
- Constipation
- Shortness of breath; difficulty breathing
- Nausea
- Depression
- Family support
1. Employed by physicians / hospitals / systems
2. Employed by Home Care Agencies
   A. Medicare Certified (20% of discharges)
      • Goals
        – Readmissions, adherence, “empowerment”
        – Add Grand-Aides capabilities
          ▪ Home Health Aides and Home Health Nurses
        – Differentiation
      • Financing
        – Same Medicare payment; lower cost
   B. Non-Medicare Certified (80% of discharges)
      • Grand-Aides USA license
GRAND-AIDES
THE BUSINESS CASE

RETURN ON INVESTMENT (1 year) = 1.46

EXPENSES PER GRAND-AIDE
- Grand-Aide: $26,000 | 100 patients
- Supervisor: $17,000 | $510 per patient
- Technology: $3,000 | 15 visits
- Transportation: $5,000 | $34 per visit
- TOTAL: $51,000

SAVINGS PER GRAND-AIDE
- 100 patients
- 25 readmissions
- Reduce by 50%
- 12 readmissions @ $2,000 = $144,000

NET SAVINGS
10 GRAND-AIDES
- $1,440,000
- -$510,000
- -$75,000
- $855,000

RETURN ON INVESTMENT (1 year) = 1.46
Grand-Aides function as a part of a primary care team, e.g. a "Patient Centered Medical Home" to help care for adults and children.

Grand-Aides

- Meet the patient / family in the clinic
- Arrange to make a home visit to get to know the family
- When a member of one of these families calls, the Grand-Aide asks a series of questions in a “protocol” for a primary care condition
- There are protocols for over 20 conditions that can be modified to fit local practice
Grand-Aide

- Receives instructions from the supervisor to either:
  - send the patient to the Emergency Department
  - send the patient to the clinic
  - have the patient stay home (with specific home remedies – e.g. Tylenol)
  - have the Grand-Aide make a home visit and use portable telemedicine to put the patient on video with the supervisor – who may then view a physical finding (e.g. rash)
EMERGENCY DEPARTMENT
“HYPER-UTILIZERS”

Patients
- Adults/teens
  - 45% mental illness / drug abuse in addition to other chronic disease
- Children
  - Their “primary care clinic”

Procedures
- Grand-Aides meet patients / family
  - In the ED if large volume
  - Telephone call the next day
    - Part of discharge instructions to patient
    - Requires information about the patient available to the clinic
      - either clinic the patient has used before or patient chooses when discharged from ED, or assigned
    - Grand-Aide calls and asks to come to clinic / can meet elsewhere
      - Can offer home visit, but may not want on first visit
- Combination of chronic, primary care, mental health and social work
A standardized curriculum has been developed for the United States and has been adapted for use around the world.

Training uses a "train the trainers" model, where the Grand-Aides Foundation trains the supervisors of the Grand-Aides and the supervisors train the Grand-Aides.

- Supervisor training 3 days
- Grand-Aides training 1 month

A web-based teaching and learning platform is under development that will be used to teach supervisors and Grand-Aides.
WHAT GRAND-AIDES DO AND DO NOT DO

1. There is **no assessment** by the Grand-Aide and **no delegation** of decision-making.

2. The Grand-Aide is supervised directly by the nurse before **every** phone call is completed.

3. **Every** home visit connects the patient and the nurse on video.

4. The Grand-Aide asks yes/no questions and transmits them verbatim to the nurse.
5. The Grand-Aide observes, records and reports, and reinforces only what the nurse told the patient to do.

6. At no time is the Grand-Aide involved in suggesting or dispensing prescription medication.

7. The nurse involves the physician in the same way as current practice.
Vanderbilt University
Department of Health Services
- REDCap worldwide database
- HIPAA compliant

Collection of all process and outcomes data
- Tablet computers and desktop
  - Grand-Aide and supervisor
    - Daily, as well as Baseline, 1, 3, 6, 12 months
- De-identified data
- Analysis and feedback quarterly
- Comparison with other similar programs
  - Webinars
GRAND-AIDES LOCATIONS: U.S.

- **READMISSION CONSORTIUM-VANDERBILT**
  - Heart Failure
    - UCLA
    - UVA
    - George Washington University
    - Temple University – Philadelphia
    - Robert Wood Johnson
    - Cleveland Clinic
    - Cornerstone ACO – NC
    - St. Vincent’s Indianapolis
    - Veteran’s Administration
    - MLK – Los Angeles
    - Beth Israel – Mr. Sinai - NY
  - Delirium
    - Houston Methodist
  - Behavioral Health
    - Houston Methodist
  - Dual Eligibles
    - Virginia
  - Medicare Advantage
    - Florida
    - UVA ACO

- **PRIMARY CARE**
  - Family Medicine Prevention
    - University of Virginia
  - Emergency Department “hyper-utilizers”
    - University of Virginia
    - Northern Arizona Healthcare - ACO
    - Children’s Medical Center – Dallas
    - Venice Family Clinic (FQHC)
    - Department of Health - Houston

- **PEDIATRIC CHRONIC DISEASE**
  - Boston
  - Dallas
  - Houston
  - New York

- **HOME HEALTH**
  - New Jersey
  - New York

- **HEALTH PLANS**
  - BCBS
  - Cigna
  - Humana
  - Aetna
GRAND-AIDES LOCATIONS: INTERNATIONAL

- Australia
- Bangladesh
- Colombia
- England
- Finland
- Indonesia
- Ireland
- Italy
- Panama
- Russia
- South Africa
- Spain
1. The “people + technology “answer” that fits into the armamentarium of physician groups, hospitals and health plans.
   - Some patients do well with an app, some can do with a nurse call, some telemedicine and others a Grand-Aide
2. Fits into the current programs of what the institution has found either too expensive or ineffective.
3. Leverages what physicians and nurses do not need to do, with 5 Grand-Aides to 1 supervisor
4. Least expensive personnel possible ($12/hour).
5. Relies on a very personal relationship
6. Every visit is supervised directly by a nurse on video
7. Provides software for institutional data; webinars with comparative data
8. Positive ROI
GRAND-AIDES
RECOGNIZED INNOVATION
Brings >5 years of experience in manuals, curriculum, as well as what works, and what does not work. Has a group of experienced people dedicated to the success of every institution and will continue to successful completion.

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Redefinition of what a physician must do

- Primary care
  - Need to see how much is needed
    - How much can the patient do
  - Physician becomes the consultant
    - Advanced decision-making
    - Complex patient decisions
      - Nurses can do “coordination”
  - APRN does more
    - RN does more
  - More nurse extenders (e.g. Grand-Aides)

So…how many primary care physicians?
FUTURE WORKFORCE: LEVERAGE

* Lverage: Redefinition of what a physician must do

** Specialty care**
- Need to see how much is needed
- Definition and use of appropriate care
- Physician becomes the consultant
  - Complex decision making
  - Procedures
- APRN does more
  - RN does more
  - Procedures will be slower to delegate
- More nurse extenders (e.g. Grand-Aides)
FUTURE WORKFORCE: PAYMENT

Payment should:

- stimulate quality, eliminate waste, incent appropriate patient volume (increase as long as high patient satisfaction)
- be independent of procedure and test volume
- be similar to current payment for current practitioners
- be more transparent and “resource based” in the future
- reflect the desire of current trainees to “trade” payment for lifestyle
FUTURE WORKFORCE: PAYMENT

- All practitioners become part of integrated systems
  - Migrate toward salary with bonus (10-20%)
  - Teams (as demonstrated to be effective and efficient)
    - Equal pay for equal work (APRN and primary care MD)
    - e.g. well baby visits, colds

- May permit FFS in top tier of insured
Physician and nurse shortage?
- Yes
- Especially geographically

As large a shortage as everyone says?
- No

Not the right question
- The issue is access to appropriate care
HOW MANY DOCTORS DO WE **REALLY** NEED

**Solutions**

- **Demand**
  - Reduce patient demand
  - Reduce physician-induced demand

- **Supply**
  - More efficient education
  - Leverage: Grand-Aides, Nurses, NP’s
  - Leverage: integrated systems and EMR
  - Role of generalist and specialist
  - Pay physicians and nurses differently