Primary Care Provider Teams:
Developing a Collaborative Physician/NP-PA Model for Delivery of Patient Care

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Essentia Health Overview

Essentia Health is a fully integrated healthcare system, with $1.6 billion in annual revenues, serving patients in Minnesota, North Dakota, Wisconsin and Idaho.
Our Mission, Vision and Values

Essentia Health Mission

We are called to make a healthy difference in people’s lives.

Essentia Health Vision

Essentia Health will be a national leader in providing high quality, cost effective, integrated health care services.

Essentia Health Values

Quality · Hospitality · Respect

Stewardship · Justice · Teamwork
Essentia Health

- Duluth Based Not-for-Profit Four State Health System
- $1.6 Billion Annual Revenues
- 13,000 Employees
- 800 Physicians
- 750 Credentialed Professionals
- 18 Hospitals
- 68 Clinics
- 446,000 Unique Patients (covered lives)
- More than 10,000 Patients/Day
- S&P “A” Rated
Learning Objectives

• Explain Essentia Health’s collaborative model for MD/NP-PA team based care
• Understand our team model operational guidelines and implementation steps
• Learn how tools can be used for data driven decision-making in determining:
  – MD/NP-PA staffing ratios based on demand/capacity gap analysis to support the team model
  – Evaluate the margin impact of the team model using financial modeling
  – Optimal panel sizes
• Describe the results of a capacity/productivity analysis and corresponding action plans
Jan. 20, 1996, when Embarrass recorded its lowest temperature ever: 57 below. Fowler said the mark would have been lower, but his thermometer broke. That's the only reason Tower — 10 miles away — holds the state record of 60 below. But he said Embarrass, unofficially, was four degrees colder.
Physician Shortage

Aging baby boomers and the 32 million newly insured people anticipated under the new federal health care law are expected to tax the medical profession in coming years.

DEMAND: 916,000

PHYSICIANS: 785,400

While demand for family physicians continues to grow, the number of medical students choosing family medicine has only begun to increase after a sharp drop and several flat years over the past decade.

SOURCES: Association of American Medical Colleges; American Academy of Family Physicians
Projected Demand for Primary Care Physicians

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total primary care physician demand (FTE)</td>
<td>212,500(^a)</td>
<td>241,200</td>
</tr>
<tr>
<td>General(^b)</td>
<td>164,400</td>
<td>187,300</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>44,800</td>
<td>49,600</td>
</tr>
<tr>
<td>Geriatrics</td>
<td>3,300</td>
<td>4,300</td>
</tr>
<tr>
<td>Primary care physician supply</td>
<td>205,000</td>
<td>220,800</td>
</tr>
<tr>
<td>Supply and demand</td>
<td>(7,500)</td>
<td>(20,400)</td>
</tr>
</tbody>
</table>

\(^a\) National demand projections presented in this report assume that in 2010 the national supply of primary care physicians was adequate except for the approximately 7,500 FTEs needed to de-designate the primary care HPSAs.

\(^b\) This category includes general and family practice, and general internal medicine.

Source: HRSA
Primary care: is there enough time for prevention?

- To fully satisfy the USPSTF recommendations, 1773 hours of a physician's annual time, or 7.4 hours per working day, is needed for the provision of preventive services.

Is there time for management of patients with chronic diseases in primary care?

**METHODS:**
- We applied guideline recommendations for 10 common chronic diseases to a panel of 2,500 primary care patients with an age-sex distribution and chronic disease prevalences similar to those of the general population, and estimated the minimum physician time required to deliver high-quality care for these conditions. The result was compared with time available for patient care for the average primary care physician.

**RESULTS:**
- Eight hundred twenty-eight hours per year, or 3.5 hours a day, were required to provide care for the top 10 chronic diseases, provided the disease is stable and in good control. We recalculated this estimate based on increased time requirements for uncontrolled disease. Estimated time required increased by a factor of 3. Applying this factor to all 10 diseases, time demands increased to 2,484 hours, or 10.6 hours a day.

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The Number of People With Chronic Conditions Is Rapidly Increasing

• In 2000, 125 million Americans had one or more chronic conditions.
• This number is projected to increase by more than one percent each year through 2030.
• Between 2000 and 2030 the number of Americans with chronic conditions will increase by 37 percent, an increase of 46 million people.

Some Proposed Solutions to the Primary Care Shortage

- Change the Model
- Nurse Practitioners and Physician Assistants
- Broaden roles of team members
- Educate and train more
- Lose less by promoting professional satisfaction
- Distribution intervention
- Nurse managed health centers
- E-health
- Telehealth
- Scope of practice laws
- Efficiency and waste
- Convienient care clinics
Institute of Medicine’s (IOM) concept of team based care

- “... the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively, to the extent preferred by each patient. The purpose of Team Based Care is to provide coordinated, high quality, and patient-centered care.” (IOM - Best Practice Innovation Collaborative, 2012).
Percentage of office-based primary care physicians with physician assistants or nurse practitioners in their practices: United States, 2012

NOTES: Primary care physicians include those in family and general practice, internal medicine, geriatrics, and pediatrics. Data omit 2.8% of physicians for whom information on physician assistants or nurse practitioners was missing. Significance was tested at the $p < 0.05$ level.

SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey, Electronic Health Records Survey.

State Variability in Supply of Office-based Primary Care Providers: United States, 2012 | March 12, 2015 | 20
Percentage of primary care physicians working with physician assistants or nurse practitioners, by practice type: United States, 2012

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solo or partner</td>
<td>36.3</td>
</tr>
<tr>
<td>Single-specialty group¹ ²</td>
<td>56.6</td>
</tr>
<tr>
<td>Multispecialty group¹</td>
<td>77.5</td>
</tr>
</tbody>
</table>

¹Significantly different from solo or partner practice (p < 0.05).
²Significantly different from multispecialty group practice (p < 0.05).

NOTES: Primary care physicians include those in family and general practice, internal medicine, geriatrics, and pediatrics. Data omit 2.9% of physicians for whom information on physician assistants or nurse practitioners was missing.

SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey, Electronic Health Records Survey.
Availibility of primary care physicians and percentage of primary care physicians working with physician assistants or nurse practitioners, by urbanicity of physician’s office location: United States, 2012

Number of primary care physicians per 100,000 population

- Large central metropolitan: 53.3
- Large fringe metropolitan: 44.7
- Medium or small metropolitan: 43.4
- Nonmetropolitan: 39.8

Percentage with physician assistant or nurse practitioner in practice

- Nonmetropolitan: 65.5
- Medium or small metropolitan: 60.4
- Large fringe metropolitan: 52.3
- Large central metropolitan: 41.9

Notes:
1. Significant increasing linear trend by urbanicity (p < 0.05).
2. Significant association between percentage with physician assistant or nurse practitioner and urbanicity (p < 0.05).

State Variability in Supply of Office-based Primary Care Providers: United States, 2012

Source: CDC/NCHS, National Ambulatory Medical Care Survey, Electronic Health Records Survey.
Annual Number of Graduates From NP Programs: Master’s and Post-Master’s Graduates, 2002 Through 2012

Source: Data Source: HRSA compilation of data from the AACN Annual Survey (in collaboration with the National Organization of Nurse Practitioner Faculties for collection of nurse practitioner data). Note: Counts include master’s and post-master’s degree NP and NP/clinical nurse specialist graduates as well as bachelor’s-to-doctorate of nursing practice graduates.
Annual Number of Newly Certified PAs, 2001 Through 2012

March 12, 2015 | 24
Source: HRSA
Clinical quality and financial performance are inseparable.

Efficiency without Quality Unthinkable

Quality without Efficiency Unsustainable
Quality of the Nurse Practitioner (NP) and Physician Assistant (PA)

- The NP role was created in 1965 and over 45 years of research consistently supports the excellent outcomes and high quality of care provided by NPs. The body of evidence supports that the quality of NP care is at least equivalent to that of physician care.

- Incorporating PAs into office or hospital practices can improve health outcomes. In one study, a trauma center transitioned to a PA-assisted program. The change resulted in an improvement in the quality of care and reduced length of stay by one day.

- Studies also show that patients are equally satisfied with medical care provided by both PAs and doctors and do not distinguish between types of providers.

American Association of Nurse Practitioners (2013). [www.aanp.org](http://www.aanp.org);
American Academy of Physician Assistants
Accountable Care Organizations

Multi-Payer ACOs
- Public & Private – 27
  - Pioneer + Medicaid + Private (2)
  - Pioneer + Private (12)
  - MSSP + Private (10)
  - Medicaid + Private (2)
- Multiple Public – 2
  - Pioneer + MSSP (1)
  - MSSP + Medicaid (1)

Single-Payer ACOs
- Private – 58 (85 total)
- Pioneer – 17 (32 total)
- MSSP – 101 (116 total)
- Medicaid – 25 (30 total)
- PGP Transitions (9 total)
Optimizing Primary Care
Physician/NP-PA Practice Model & Principles
Project Overview

Problem/Opportunity Statement

Primary care panel sizes varied widely in number and complexity of patients. The match of Physicians, NPs (Nurse Practitioners) and PAs (Physician Assistants) is inconsistent. High quality, efficient and effective care could improve through consistent care team models and professional roles.

Goal

Establish a collaborative Physician and NP-PA team and staffing model based on size and complexity of patient population in surrounding communities without increasing expenses
Project Approach

- Multidisciplinary team formed that included Physicians, NPs, PAs and Operational Leaders
- Utilized Lean Six Sigma methodologies to measure/analyze current state
- Two day event held with team members to brainstorm ideas and determine solutions
Estimating a Reasonable Patient Panel Size for Primary Care Physicians With Team-Based Task Delegation

- **METHODS** We used published estimates of the time it takes for a primary care physician to provide preventive, chronic, and acute care for a panel of 2,500 patients, and modeled how panel sizes would change if portions of preventive and chronic care services were delegated to non-physician team members.

- **RESULTS** Using 3 assumptions about the degree of task delegation that could be achieved (77%, 60%, and 50% of preventive care, and 47%, 30%, and 25% of chronic care), we estimated that a primary care team could reasonably care for a panel of 1,947, 1,523, or 1,387 patients.

- **CONCLUSIONS** If portions of preventive and chronic care services are delegated to non-physician team members, primary care practices can provide recommended preventive and chronic care with panel sizes that are achievable with the available primary care workforce.

- **Justin Altschuler**, MD, **David Margolius**, MD, **Thomas Bodenheimer**, MD, **Kevin Grumbach**, MD, Annals of Family Medicine, *September/October 2012 vol. 10 no. 5 396-400*
Shared Team Panel Size

Panel Size per MD FTE

- Median:
  - 3400
- Mean:
  - 3200
Our Team Approach
Patient Partner Involvement

Relationships

Access

Continuity of Care

Communication
Three major components

- Working to Capacity
- Demand/Capacity Match & Optimal Panel Size
- Physician/NP-PA Practice Model
• Increase access using NP/PA collaboration

• Design practical changes that lead to top of license work, role clarity, and teamwork
Physician/NP-PA Team Model of Care Guidelines

• All patients will have a Primary Care Team including both a Physician and NP or PA.
• Primary Care Provider can be the Physician, NP or PA.
• Physician/NP-PA Team combination is specific to the clinic site and depends on: FTE of Physician/NP-PA and patient panel size and complexity.
  – Team Model is a minimum of 2 and maximum of 4 Physician/NP-PA team members.
• Physicians are always part of the team and accountable for the overall functioning of the patient care team.
List Primary Care Provider and PC Team in Epic

<table>
<thead>
<tr>
<th>Test, Sara</th>
<th>4751444</th>
<th>34 year old / F</th>
<th>PCP: Joseph A. Bianco</th>
<th>PC Team: Christie E. Erickson</th>
</tr>
</thead>
</table>

2/19/2015 visit with Joseph A Bianco, MD for Office Visit

- Allergies: Not on File
- SpO2: 98%
- BMI: 23
- Smoking Status: Current Some Day Smoker

Chief Complaint
- None

Recent Visits with Joseph A Bianco, MD
- None

Other Visits in Family Practice
- None
Care Management

- Most complicated patients (top tier 10%) will be seen by the MD
  - Including planned collaboration with team members

- Chronic disease management will be shared responsibility between MD and NP-PA
  - Visits
  - Between visit work

- Wellness visits should be shared between MD and NP-PA
  - Physical
  - Well Checks
  - Preventative Care
  - Sports Physicals

- Acute care should be handled as follows:
  - MD sees: High Risk Acute & Post Hospitalizations
  - Schedulers should use scheduling key based on systems
### A Few Cost the Most

**National Sample of 21 Million Insured Americans, 2003-2007**

<table>
<thead>
<tr>
<th>% of Population</th>
<th>% of Total Healthcare Expense</th>
<th>Mean Annual Cost per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>29%</td>
<td>$101,000</td>
</tr>
<tr>
<td>9%</td>
<td>39%</td>
<td>$15,000</td>
</tr>
<tr>
<td>20%</td>
<td>21%</td>
<td>$3,700</td>
</tr>
<tr>
<td>70%</td>
<td>11%</td>
<td>$580</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters Markets can Database
Key Activities for an Effective Physician/NP-PA Team

- New Team: Schedule a weekly 30 minute Physician/NP-PA direct face to face team meeting.
- Established Team: Schedule monthly 30 minute direct face to face meeting.
- Implement Daily Physician/NP-PA Huddle (5-10 minutes) Physician and NP-PA.
- Establish close proximity of office space between Physician and NP-PA, best option is sharing an office.
WHAT IS A PRIMARY CARE PROVIDER TEAM?

Your primary care provider (PCP) team is a partnership of physicians, physician assistants (PAs), and nurse practitioners (NPs), who combine their skills and experience to provide you with excellent care. Our PAs and NPs at Essentia Health provide high-quality, cost-effective care in partnership with primary care physicians.

DO I STILL HAVE A PRIMARY CARE PROVIDER?

Yes. Within a team-based care model, you may choose whether your PCP is a doctor, an NP, or a PA. There is always a physician available on the team.
# Chronic Disease Guidelines for Sharing Patients

## Family Medicine - Chronic Condition Follow Up Guidelines

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Condition/Status = Controlled / At Target</th>
<th>Condition/Status = Uncontrolled / Not at Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physician Appt</td>
<td>NP-PA Appt</td>
</tr>
<tr>
<td></td>
<td>Physician Appt</td>
<td>NP-PA Appt</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Annually</td>
<td>Every 6 Months F/U</td>
</tr>
<tr>
<td>IVD (Vascular Disease)</td>
<td>Annually</td>
<td>Every 6 Months F/U</td>
</tr>
<tr>
<td>Congestive Health Failure</td>
<td>Annually</td>
<td>Every 6 Months F/U</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Per AP Referral</td>
<td>Annually</td>
</tr>
<tr>
<td>Depression</td>
<td>Annually</td>
<td>Every 6 Months F/U</td>
</tr>
<tr>
<td>COPD or Asthma</td>
<td>Annually</td>
<td>Every 6 Months F/U</td>
</tr>
</tbody>
</table>
What makes a team work?

Lab results for pt who will be seeing you on 1/26

*****Message*******
From: Results Interface
Sent: 1/23/2015 10:02 AM
To: Christie E Erickson, APRN, CNP
Creating the Team

- Working to Capacity
- Demand/Capacity Match & Optimal Panel Size
- Physician/NP-PA Practice Model
Staffing for team model predicated on need to work to defined clinic contact hours and available appointments based on scheduling rules.
Clinic type: office, full scope (OB, ER, hospital) or “tweener” defines clinic contact hours and available appointments

- Appts needed for each patient per year averaged 2.1 visits
- Added 10% to 20% “advanced access” factor

Linda V. Green, Sergei Savin and Yina Lu; Primary Care Physician Shortages Could be Eliminated Through Use of Teams, Nonphysicians and Electronic Communication  *Health Affairs*, 32, no.1 (2013):11-19
Do we have enough appointments for the patients we serve?

How many appointments were we currently providing?
How many appointments should we have available?
Would that be enough to meet the needs of our patients at this site?
What was the data telling us?
Do we have enough appointments for the patients we serve?

How many appointments were we currently providing?
How many appointments should we have available?
Would that be enough to meet the needs of our patients at this site?
What was the data telling us?

![Annual Demand and Capacity, Clinic B](chart.png)

How many appointments were we currently providing?
How many appointments should we have available?
Would that be enough to meet the needs of our patients at this site?
What was the data telling us?
Do we have enough appointments for the patients we serve?

How many appointments were we currently providing?
How many appointments should we have available?
Would that be enough to meet the needs of our patients at this site?
What was the data telling us?

![Annual Demand and Capacity, Clinic C](chart)

- Actual Encounters: 27,101
- Available Appointments: 28,678
- Patient Demand: 39,626

How many appointments were we currently providing?
How many appointments should we have available?
Would that be enough to meet the needs of our patients at this site?
What was the data telling us?
Factors that Reduced Appointment Availability

• No show and same day cancellation rate
• New Physician and NP-PA practice ramp up
• Scheduling templates
  – Holds and blocks
  – Lack of standardization
• Barriers to access
  – Complex scheduling rules
• Turnover, leaves – mid-year changes
• Working to expected contact hours and FTE
Strategies Developed to Increase Actual Encounters

- Remove scheduling blocks and holds, work to expected contact hours and FTE
- Rearrange call and hospital coverage or meeting schedules to increase contact hours
- Manage vacation time and distribution more closely
- Physician/NP-PA performance coaching
- Remove appointment type variation
Strategies for Clinics that were Over Staffed

• Abandoned recruitment plans

• Will not replace planned retirements or other attrition

• Some sites plan to “grow into” their excess capacity by developing and executing specific market strategies to grow unique patients
Strategies Developed to Increase Available Appointments

Annual Demand and Capacity, Clinic C

- Actual Encounters: 27,101
- Available Appointments: 28,678
- Patient Demand: 39,626
## Tool to Calculate Ideal Staffing

### Team Model Staffing Worksheet

<table>
<thead>
<tr>
<th>Clinic Name:</th>
<th>Clinic Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic C</td>
<td>Clinic Only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel Information</th>
<th>Staffing</th>
<th>Demand/Capacity Data for Calculations</th>
<th>Demand/Capacity Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Current Patients (Listed &amp; Unlisted)</td>
<td>17,154</td>
<td><strong>Current</strong></td>
<td><strong>6.20</strong></td>
</tr>
<tr>
<td>Contact Hours for Clinic Level</td>
<td>36</td>
<td><strong>Proposed</strong></td>
<td><strong>6.20</strong></td>
</tr>
<tr>
<td>Optimal Panel Size</td>
<td>2,461</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Clinic Average Panel Size per Clinic MD FTE</td>
<td>2,767</td>
<td><strong>Scheduled encounters per week</strong></td>
<td><strong>90</strong></td>
</tr>
<tr>
<td>Panel Size Ratio Current vs. Optimal</td>
<td>1.12</td>
<td><strong>Weeks worked per yr</strong></td>
<td><strong>44</strong></td>
</tr>
<tr>
<td><strong>Demand: Adjusted for advanced access</strong></td>
<td><strong>39,626</strong></td>
<td><strong>Demand: Adjusted for advanced access</strong></td>
<td><strong>39,626</strong></td>
</tr>
</tbody>
</table>
Financial Implications of Proposed Staffing Plan

By hiring 2 NPs-PAs instead of physicians, we anticipated an improvement the clinic’s financial margin.

<table>
<thead>
<tr>
<th>Productivity and Growth Amount</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Encounters</td>
<td>(2,964)</td>
</tr>
<tr>
<td>NP-PA Encounters</td>
<td>6,452</td>
</tr>
<tr>
<td>Physician FTE</td>
<td>(1.00)</td>
</tr>
<tr>
<td>NP-PA FTE</td>
<td>2.00</td>
</tr>
<tr>
<td>RN Staff FTE</td>
<td>-</td>
</tr>
<tr>
<td>Other Staff FTE</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY12 Clinic C Direct Operating Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>$931,671</td>
</tr>
<tr>
<td>$1,212,156</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Growth Year Clinic C Direct Operating Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>$800,000</td>
</tr>
<tr>
<td>$1,000,000</td>
</tr>
<tr>
<td>$1,200,000</td>
</tr>
<tr>
<td>$1,400,000</td>
</tr>
</tbody>
</table>

Margin Change: $280,486
Impact of Project

<table>
<thead>
<tr>
<th>Region</th>
<th>Baseline MDs/NPs-PAs</th>
<th>Actual MDs/NPs-PAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MDs</td>
<td>NPs-PAs</td>
</tr>
<tr>
<td>East</td>
<td>86.3</td>
<td>36.5</td>
</tr>
<tr>
<td>West</td>
<td>46.2</td>
<td>16.6</td>
</tr>
<tr>
<td>Central</td>
<td>20.8</td>
<td>3.96</td>
</tr>
<tr>
<td>Essentia</td>
<td>153.3</td>
<td>57.06</td>
</tr>
</tbody>
</table>

- Savings in Physician/NP-PA salary expenditure = $2.24 million
- Clinic action plans improved clinic productivity which equated to 29,000 annual encounters
Measurements for success/sustainability

- Monthly tracking of working to available appointments
- Annual review of ability to meet patient needs used for budgeting
- Tracking data for team implementation
- Physician/NP-PA satisfaction
# Sustaining Quality

## Clinical Quality Dashboard

**Ver: 2.2**

### Select .. to view by Clinical Hierarchy

- All Clinical Hierarchy

### Select .. to view by Provider(s)

- All Providers

## Ambulatory Care Measures

<table>
<thead>
<tr>
<th>KPI</th>
<th>Time</th>
<th>Value</th>
<th>Eval</th>
<th>Sparkline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension Patients Receiving Optimal Care</td>
<td>Feb 14, 2015</td>
<td>82.41 %</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>Diabetic Patients Receiving Optimal Care</td>
<td>Feb 14, 2015</td>
<td>47.83 %</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>Mammography Compliance</td>
<td>Feb 14, 2015</td>
<td>77.00 %</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>Vascular Patients Receiving Optimal Care</td>
<td>Feb 14, 2015</td>
<td>65.12 %</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>Childhood Immunization Compliance</td>
<td>Feb 14, 2015</td>
<td>80.81 %</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>Colorectal Cancer Screening Rate</td>
<td>Feb 14, 2015</td>
<td>70.70 %</td>
<td>green</td>
<td></td>
</tr>
</tbody>
</table>
Next Steps

• All recruitment decisions use formal analysis and approval process
• Alignment of comp model
• Regional leadership roll out plan with implementation packet/timeline
• Developed tools/strategies for facilitating change and overcoming adaptive hurdle
• Clinic communication and education plan