Process, Elements, and the Dental Practice

Delivering Clinical Effectiveness and Efficiency

James Patsis, DDS MBA
One Sweet Nation…without a Dental Plan!

Annual sugar consumption per person

- 2003: 142 lbs
- 1967: 117 lbs
- 1901: 7 lbs

U.S. News and World Report, 2005
Waiting for a Fluoridated Solution in PA

23% of the Municipal Water in York County is Fluoridated…
the prevalence of decay for at risk populations is not located in fluoridated areas

Decay Price Tag
York County, PA
$105,000,000

Commonwealth of PA
$17,500,000,000

From the American Dental Association from ADA Guide to Dental Therapeutics (2nd ed.)
James Patsis, DDS MBA

From General Dental Practice to the Continuous Chemical Process World

Collaborative Manufacturing and Supply Chain Strategies
November 5-6, 2002 - Düsseldorf, Germany
James Patsis, DDS MBA

...into Community Health Dentistry

(Family First Health, York PA, Jan 15, 2005)
The Basics
Elements and Process

- Air
- Fire
- Water
- Earth
....Become Systems

(Macro-Processes)

(Sub-Processes)

(Process)

(Activity)

(Task)

(Element)

Community Health Center

Dental Department

Dental Appointment

Preparing the Room

Cleaning the Chair

The Chair

Figure 2.1 Process hierarchy.
Characteristics of Processes

- **Flow** - Transformation of Inputs to Output
- **Effectiveness** - Expectations are Met
- **Efficiency** - Resources Used to Produce an Output
- **Cycle Time** - Time from Input to Output
- **Cost** - Expense of the Entire Process
The Eff---words

■ Efficiency
  ■ is ability to improve the amount of output generated without changing inputs, or in other words, the amount of “waste” is reduced or removed
  ■ “The amount of slide you get without adding any more glide to it.”

■ Effectiveness
  ■ producing or capable of producing a desired result.
  ■ “Did you arrive at the ENDPOINT?”

Streamline the Process
All Dental Offices have Elements…
...Tasks, Activities and Processes

- In-Taking Patient Reception
- Preparing Operatory
- Dental Filling Procedure
- Discharging Patient
- Billing Scheduling Charting

(Tooth #30-O Amalgam)
(Clinical Value-Added)
(Non-Clinical Value)
(Non-Clinical Value)
The Most Critical Dental Process…
The Dental Appointment

Preparing Operatory

(Tooth #30-O Amalgam)

(Clinical Value Added)

(Non-Clinical Value)
Preparing Operatory Process Steps

1. Wipe Dr's Chair
2. Wipe Dental Light
3. Wipe Patient Protective Glasses
4. Wipe Dental Chair
5. Wipe Assistant tray and Hoses (5a) Wipe Back countertop and sink (5b)
6. Gather Instruments/Cassettes on metal tray
7. Wipe the place where the metal tray was seated with dirty instruments
8. Remove plastic wrap
9. Wipe metal tray in sterilization
10. Remove Gloves
11. Place new plastic coverings

(Tooth #30-O Amalgam)

18 Elements are involved in this Activity
11 Tasks are involved in this Activity
5 Activities are involved in this Process
The Dental Appointment

1. Wipe Dr's Chair
2. Wipe Dental Light
3. Wipe Patient Protective Glasses
4. Wipe Dental Chair
5. Wipe Assistant tray and Hoses (5a) Wipe Back countertop and sink (5b)
6. Gather Instruments/Cassettes on metal tray
7. Wipe the place where the metal tray was seated with dirty instruments
8. Remove plastic wrap
9. Wipe metal tray in sterilization
10. Remove Gloves
11. Place new plastic coverings
The Dental Appointment

Process Steps

In-taking Patient Reception → Preparing Operatory → Dental Filling Procedure → Discharging Patient → Billing Scheduling Charting

1. JUST IN TIME EVENT
   MOST CRITICAL CLINICAL VALUE ACTIVITY
   (Non-Clinical Value)

2. BATCH EVENT
   MOST CRITICAL NON-CLINICAL ACTIVITY
   (Clinical Value Added)

3. MOST CRITICAL NON-CLINICAL ACTIVITY
   (Non-Clinical Value)

4. (Clinical Value Added)
Taking it Higher….
Processes Improvement Can …

- Maximize Organizational Resources
- Eliminate Clinical Errors and Delays
- Increase Overall Patient Flow
Challenge Organizational Differences

Clinicians
- Do-ers
- 1:1 interactions
- Reactive personalities
- Require immediate gratifications
- Clinical Decision Makers
- Value autonomy
- Independent
- Advocate for the patient
- Identify with the profession
- Independent

Management
- Planners-designers
- 1:n interactions
- Proactive personalities
- Accept delayed gratification
- Delegators
- Value Collaboration
- Participatory
- Advocate for the organization
- Identify with the organization
- Interdependent

Manage the Process
Limited Size Operatories
Improperly Positioned Dental Chairs
Lack of Storage Space
Dental Workflows don’t match Floor Plan

Inefficient Scheduling
No Maintenance Protocols
Inconsistent Practiced Policy
OSHA Hazard Mats
Infection Control

Lack of Maintenance
Improperly Placed Equipment
Unsuitable Equipment
Non-Standardized Setups
Lack of Inventory Controls

Incomplete Charts and Super Bills
Inconsistent Scheduling
No Maintenance Protocols
Inconsistent Practiced Policy
OSHA Hazard Mats
Infection Control

Lack of Trained Personnel
Improperly Positioned, Placed, And Use of Personnel

And Deliver Lean Dental Care

Lean Healthcare Delivery

Input

- Digitalization
- Provider Capability
- Reduction of Variation
- Office Layout
- Containerization
- Workplace Organization
- Pull Scheduling
- Level Scheduling

Output

- Supplier Development
- Standardized Work
- Error Reporting
- Equipment Maintenance
- Inventory Controls

Understand the Process
Limited Size Operatories
Improperly Positioned Dental Chairs
Lack of Storage Space
Dental Workflows don’t match Floor Plan

… Start the Process

Equipment/Supplies
Lack of Maintenance
Improperly Placed Equipment
Unsuitable Equipment
Non-Standardized Setups
Lack of Inventory Controls

Incomplete Charts and Super Bills
Inefficient Scheduling
No Maintenance Protocols
Inconsistent Practiced Policy
OSHA
Hazard Mats
Infection Control

Physical Space
Limited Size Operatories
Improperly Positioned Dental Chairs
Lack of Storage Space
Dental Workflows don’t match Floor Plan

Improved Dental Delivery

Phase I

Policy/Procedures

Personnel
Lack of Trained Personnel
Improperly Positioned, Placed, And Use of Personnel

Organizing for Improvement
Lack of Trained Personnel

(Family First Health Dental, Jan 2005) (Family First Health Dental, Nov 2007)

Work Standardization and Simplification

Work Simplification Work Standardization
Standardize, Organize and Deliver

Work Standardization

Workplace Organization

Quick Set-up

Streamline the Process
Control by Peer Review

Table 1 shows the percent compliance by site and by dental provider (dentist).

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>% YES</th>
<th>% NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Completed patient demographics (Name, DOB, and Chart number) on medical and dental sheets.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Patient’s medical history form signed and dated; relevant medical status history documented in progress notes (BP, Murmur, V08, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Documentation and labeling of medical conditions, such as AHA prophylaxis, allergies, et al. on the dental examination chart as required.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Radiographs order(s) logged, signed and dated appropriately.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Progress notes are logical, legible and the entries are appropriately written, signed, and dated</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Provider Weighed Avg.</th>
<th>Overall Compliance % (1st Q '07)</th>
<th>Overall Compliance % (4th Q '07)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Patsis</td>
<td>95%</td>
<td>(94%)</td>
</tr>
<tr>
<td>Dr. Mountain</td>
<td>93%</td>
<td></td>
</tr>
<tr>
<td>Dr. LaJuan</td>
<td>84%</td>
<td></td>
</tr>
<tr>
<td>Dr. Yoon</td>
<td>93%</td>
<td></td>
</tr>
<tr>
<td>Overall Compliance %</td>
<td>(89%)</td>
<td></td>
</tr>
</tbody>
</table>

From 110 to 40 errors

<table>
<thead>
<tr>
<th>Provider Weighed Avg.</th>
<th>Total in compliance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Patsis</td>
<td>95%</td>
</tr>
<tr>
<td>Dr. Mountain</td>
<td>93%</td>
</tr>
<tr>
<td>Dr. LaJuan</td>
<td>95%</td>
</tr>
<tr>
<td>Dr. Yoon</td>
<td>93%</td>
</tr>
<tr>
<td>Overall Compliance %</td>
<td>(94%)</td>
</tr>
</tbody>
</table>

Measurements And Control
Providers Define the Schedule but Front Desk Drives It

Next Day Schedules must be Validated by Providers

Front Desk Checks, Controls and Monitors the Provider Scheduling Inputs

... Link to a ‘Standardized’ Schedule

17 Scheduled Patients

- Reduction of Variation
- Pull Scheduling
- Level Scheduling

Measurements And Control
Limited Size Operatories
Improperly Positioned Dental Chairs
Lack of Storage Space
Dental Workflows don’t match Floor Plan

Move the Process

Equipment/Supplies
- Lack of Maintenance
- Improperly Placed Equipment
- Unsuitable Equipment
- Non-Standardized Setups
- Lack of Inventory Controls

Physical Space
- Limited Size Operatories
- Improperly Positioned Dental Chairs
- Lack of Storage Space
- Dental Workflows don’t match Floor Plan

Policy/Procedures
- Incomplete Charts and Super Bills
- Inefficient Scheduling
- No Maintenance Protocols
- Inconsistent Practiced Policies
  - OSHA
  - Hazard Mats
  - Infection Control

Personnel
- Lack of Trained Personnel
- Improperly Positioned, Placed, And Use of Personnel

Improved Dental Delivery

Phase I
Phase II

Organizing for Improvement
Case Study: Dental Bur Blocks

Saved 24,000 minutes of Lost Productivity
Reduced the Number of Blocks 5 to 3
Decreased the Variation in Burs 3 Setups
Equals $93,333 in Revenue
Decreased Staff Frustration
Decreased Inventory From 45 Burs Types to 18

Work Standardization
Workplace Organization
Quick Set-up
Containerization
Reduction In Variation

Streamline the Process
Deliver Lean Dental Care

Prepping the Operatory

Work Standardization

Workplace Organization

Quick Set-up

Reduction In Variation

Error Reporting

18 Elements are involved in this Activity
11 Tasks are involved in this Activity
5 Activities are involved in this Process

Process time: 5 min

Streamline the Process
Case Study: Operatory Set-Up

1. Wipe Dr's Chair
2. Wipe Dental Light
3. Wipe Patient Protective Glasses
4. Wipe Dental Chair
5. Wipe Assistant tray and Hoses (5a) Wipe Back countertop and sink (5b)
6. Gather Instruments/Cassettes on metal tray
7. Wipe the place where the metal tray was seated with dirty instruments
8. Remove plastic wrap
9. Wipe metal tray in sterilization
10. Remove Gloves
11. Place new plastic coverings

Streamline the Process

18 Elements are involved in this Activity
11 Tasks are involved in this Activity
5 Activities are involved in this Process
Balanced Clinical Spaces...

Hanover Dental- 5 Operatories
Model Office for Implementing
- EFDA
- Digitalization
- No-Show Policy
- New Patient Entry Strategies

... to Patients, Providers and Clinical Activities
Hanover Dental - 5 Operatories
Model Office for Implementing
• EFDA
• Digitalization
• No-Show Policy
• New Patient Entry Strategies

Streamline the Process
Non-Clinical
Clinical Support
Clinical
Non-Clinical
Clinical Support
Clinical
Non-Clinical
Streamline the Process
PRELIMINARY DESIGN
... Complete the Process

**Equipment/Supplies**
- Lack of Maintenance
- Improperly Placed Equipment
- Unsuitable Equipment
- Non-Standardized Setups
- Lack of Inventory Controls

**Physical Outlay**
- Limited Size Operatories
- Improperly Positioned Dental Chairs
- Lack of Storage Space
- Dental Workflows don’t match Floor Plan

**Policy/Procedures**
- Incomplete Charts and Super Bills
- Inefficient Scheduling
- No Maintenance Protocols
- Inconsistent Practiced Policies
- OSHA
- Hazard Mats
- Infection Control

**Personnell**
- Lack of Trained Personnel
- Improperly Positioned, Placed, And Use of Personnel

**Improved Dental Delivery**

**Phase I**
**Phase II**
**Phase III**

Organizing for Improvement
Streamline the Process

Improved Elements and Process Lead to …

- Time Savings
- Cost Efficiency
- Improved Ergonomics
- Inventory Reduction

= Increased Process Flows
  (Increased Patient Visits)

An Improved Patient Experience
Build New Practice Models
Things Dental Must Be ...

- Controllable
- Predictable
- Consistent

Regular Dental Appointments
- Provider Time 15 min

EFDA Dental Appointments
- Provider Time 45 min

Measurements And Control

PERFECTLY TIMED to ...

JUST IN TIME EVENT MOST CRITICAL CLINICAL ACTIVITY Provider Time

Provider Time

15 min

45 min

15 min

45 min

15 min

45 min

15 min

45 min

15 min

45 min

15 min

45 min

15 min

45 min
Measure and Control

Process Waste
- Corrections
- Over Processing
- Over-Production
- Waiting
- Motion
- Inventory
## Error Reduction by Observation

From 42 to 5 errors

### ENCOUNT FORM ERROR TALLY

<table>
<thead>
<tr>
<th>Provider w/ Hygiene</th>
<th>Dr. Yoon</th>
<th>Dr. Ptsis</th>
<th>Dr. LaJuan</th>
<th>Dr. Joe</th>
<th>Inna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing checked at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrong code checked for N/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab slips missing pt info</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charges for the day:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wrong code checked</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Next appt:
- appt type missing
- surface missing
- tooth missing
- provider missing: 1
- wrong provider given
- wrong time
- complete code missing
- wrong tooth for N.V

Total:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>4</th>
<th>15</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
</table>

Measurements And Control
“Want to Turbo-Charge the Office?”
...Bring in an EFDA Program

- An EFDA Specific Schedule is Needed
- Performs Restorative Dentistry Only (fillings)
- Facilitates Patient Flow and Billable Dental Visits

An EFDA Specific Schedule is Needed

Performs Restorative Dentistry Only (fillings)

Facilitates Patient Flow and Billable Dental Visits

27 Scheduled Patients

<table>
<thead>
<tr>
<th>Time</th>
<th>Last Name/First Name</th>
<th>GSD</th>
<th>Sc</th>
<th>GSD</th>
<th>Last Name</th>
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<tr>
<td>08:00</td>
<td>Patient 1</td>
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<td>GSD</td>
<td>Patient 2</td>
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<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 3</td>
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<tr>
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<td>Patient 3</td>
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<td>GSD</td>
<td>Patient 4</td>
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<td>Patient 4</td>
<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 5</td>
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<tr>
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<td></td>
<td>GSD</td>
<td>Patient 6</td>
</tr>
<tr>
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<td>Patient 6</td>
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<td></td>
<td>GSD</td>
<td>Patient 7</td>
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<tr>
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<td>Patient 7</td>
<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 8</td>
</tr>
<tr>
<td>10:00</td>
<td>Patient 8</td>
<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 9</td>
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<td>Patient 9</td>
<td>GSD</td>
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<td>GSD</td>
<td>Patient 10</td>
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<td>Patient 10</td>
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<td>Patient 11</td>
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<tr>
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<td>GSD</td>
<td>Patient 12</td>
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<tr>
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<td>Patient 13</td>
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<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 14</td>
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<td>GSD</td>
<td>Patient 15</td>
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<td>Patient 16</td>
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<td>Patient 17</td>
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<tr>
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<td>Patient 18</td>
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<td>Patient 19</td>
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<td>Lunch</td>
<td>GSD</td>
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<td>Patient 20</td>
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<td>Patient 22</td>
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<td>14:15</td>
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<td>GSD</td>
<td>Patient 23</td>
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<td>14:30</td>
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<td></td>
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<td>Patient 24</td>
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<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 25</td>
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<td>15:00</td>
<td></td>
<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 26</td>
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<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 27</td>
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<td>15:30</td>
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<td>GSD</td>
<td>Patient 28</td>
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<td>Patient 29</td>
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<td>16:15</td>
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<td>GSD</td>
<td></td>
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<td>Patient 31</td>
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<tr>
<td>16:30</td>
<td></td>
<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 32</td>
</tr>
<tr>
<td>16:45</td>
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<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 33</td>
</tr>
<tr>
<td>17:00</td>
<td></td>
<td>GSD</td>
<td></td>
<td>GSD</td>
<td>Patient 34</td>
</tr>
</tbody>
</table>
Managing Capacity and Demand

Limited Appointments…

…Lots of Patients
Managing Capacity and Demand

- If Demand for Care is Greater than Capacity, Patient Care Delivery will be Delayed
- If the Capacity is Greater than Demand, then Resources are Being Wasted
- When Capacity and Demand are Matched, Patient Care Delivery Flows Evenly
Accounting for Uncertainty
The “Dreaded” No-Show Patient
The Rule of 72

Defines the Cost Impact of No-Shows

- Method or Predicator of Loss due to No-Show Appointments
- Half of this Year’s Gross Revenue would be lost in 2.9 years due to a 25% No-Show Rate

<table>
<thead>
<tr>
<th>No-Show Rate</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>40%</th>
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</thead>
<tbody>
<tr>
<td>Years</td>
<td>7.2</td>
<td>4.8</td>
<td>3.6</td>
<td>2.9</td>
<td>2.4</td>
<td>2.1</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Anxiety Increases with Patient Wait Time

Unexplained Waits Feel Longer to the Patient

Unfair Waits “are longer” than Equitable Waits

An Effective No-Show Policy …

- Contains an “If-Then” Statement and a Time Dependent Penalty
- Has a Written and Signed Patient-Provider Contract
- Is Constantly Reinforced Within the Organization and Documented at Patient Contact Points
- Limitations to Care and Provisions for Return to Care

….is Only as Effective as Your Practice Model
The No-Show Predictive Productivity Model

A Consultant’s Formula to Address Lost Productivity Due to No-Show Patients:

\[ P = \sum [Ps \times S] + Pw \]

Where:
- \( P \) = Productivity
- \( Ps \) = Number of patients scheduled
- \( S \) = Show Rate
- \( Pw \) = Number of Walk-in Patients Seen by Provider
A Consultant’s Formula to Address Lost Productivity Due to No-Show Patients:

\[ P = \sum (20 \times 60\%) + 5 \]

\( P = \) Productivity (17)
\( Ps = \) Number of patients scheduled (20)
\( S = \) Show Rate (60%)
\( Pw = \) Number of Walk-in Patients Seen by Provider (5)

The No-Show Predictive Productivity Model
A Consultant’s Formula to Address Lost Productivity Due to No-Show Patients:

\[ P = \sum [20 \times 60\%] + 5 \]

Where:
- \( P \) = Productivity (17)
- \( Ps \) = Number of patients scheduled (20)
- \( S \) = Show Rate (60%)
- \( Pw \) = Number of Walk-in Patients Seen by Provider (5)
No-Shows are About...

Patient Satisfaction

\[
\text{Perceptions} - \text{Expectations} = \text{Timeliness} + \text{Value Experience} - \text{Wait}
\]
Reach New Heights…
To Improved Dental Delivery

### South George Street Dental Center

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual Visits</th>
<th>Visit Goal (1.6 pat/hour)</th>
<th>Actual Patient Care Hours</th>
<th>Visits (pat/hr) Actual</th>
<th>Scheduled Visits</th>
<th>NS Visits</th>
<th>NS Rate</th>
<th>Adj NS Rate (Goal-10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/6</td>
<td>6619</td>
<td>7182</td>
<td>4489</td>
<td>1.5</td>
<td>8948</td>
<td>2578</td>
<td>29%</td>
<td>26%</td>
</tr>
<tr>
<td>2006/7</td>
<td>9292</td>
<td>9196</td>
<td>5747</td>
<td>1.6</td>
<td>11810</td>
<td>3154</td>
<td>27%</td>
<td>21%</td>
</tr>
<tr>
<td>2007/8</td>
<td>9879</td>
<td>9182</td>
<td>5739</td>
<td>1.7</td>
<td>12254</td>
<td>3129</td>
<td>26%</td>
<td>19%</td>
</tr>
<tr>
<td>2008/9</td>
<td>1728</td>
<td>1467</td>
<td>917</td>
<td>1.9</td>
<td>2115</td>
<td>483</td>
<td>23%</td>
<td>18%</td>
</tr>
</tbody>
</table>

### FFH All-Dental Centers

<table>
<thead>
<tr>
<th></th>
<th>Actual Visits</th>
<th>Visit Goal (1.6 pat/hour)</th>
<th>Actual Patient Care Hours</th>
<th>Visits (pat/hr) Actual</th>
<th>Scheduled Visits</th>
<th>NS Visits</th>
<th>NS Rate</th>
<th>Adj NS Rate (Goal-10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGC</td>
<td>888</td>
<td>746</td>
<td>466</td>
<td>1.90</td>
<td>1070</td>
<td>236</td>
<td>22%</td>
<td>17%</td>
</tr>
<tr>
<td>HP</td>
<td>210</td>
<td>186</td>
<td>117</td>
<td>1.80</td>
<td>261</td>
<td>72</td>
<td>28%</td>
<td>20%</td>
</tr>
<tr>
<td>Hanover</td>
<td>377</td>
<td>436</td>
<td>273</td>
<td>1.38</td>
<td>450</td>
<td>75</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Total</td>
<td>1098</td>
<td>932</td>
<td>583</td>
<td>1.72</td>
<td>1331</td>
<td>308</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>July</td>
<td>Aug</td>
<td>Sept</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>------</td>
<td>-----</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Dr. Yoon</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Dr. Mountain</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Dr. Joseph</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Dr. Patsis</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total # of Perfect Days: 4 13 10 12 6 9 54

You can even have A PERFECT DAY.
The Perfect Practice Day

<table>
<thead>
<tr>
<th>Hanover Dental Center</th>
<th>Date: 4/15/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>Patients</td>
</tr>
<tr>
<td>Scheduled</td>
<td>Cancelled</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>116 South George Street Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hannah Penn Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>107</td>
</tr>
</tbody>
</table>
Improving the Delivery Model

FFH Dental Strategic Plan

- Increase Dental Infrastructure to Access to Populations in Need
- Continue Process Improvement Initiatives with their Resultant Practice Delivery Efficiencies and Effectiveness
- Roll-out Push and Pull Community Based Prevention and Intervention Programs to At-risk Populations
- Implement a Trans-disciplinary Approach to Oral Health Disease Prevention
... Of Community Dentistry

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing Together Patients</td>
<td>56</td>
<td>106</td>
<td>126</td>
<td>160</td>
</tr>
<tr>
<td>Sharing Together Visits</td>
<td>196</td>
<td>386</td>
<td>488</td>
<td>610</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City of York Head Start</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Students Screened</td>
<td>60</td>
</tr>
<tr>
<td>Total # of Patients In Treatment</td>
<td>48</td>
</tr>
<tr>
<td># of Areas of Decay</td>
<td>240</td>
</tr>
<tr>
<td>Total Cases Completed</td>
<td>11</td>
</tr>
</tbody>
</table>
Reaching the Summit
The Last Eff-word

- Practice Efficacy
  - Is the Ability of a Community Health Center Practice to Deliver Capacity and a Dental Model that Produces Positive, Directed and Effective Results to the Communities it Serves

- = Practice (Effectiveness + Efficiency)
Process and Elements

- Basic Building Blocks of an Overall Systems

- Can Reveal Constraints and Hidden Potential in Delivering Improved Patient Care

- Facilitate and Align Patient Care Demand to Provider Delivery Capacity
Process and Elements

- Develop Replicable Processes that Become Lean Standardized Operating Procedures
- Ensure the Continuity of Patient Care not a Single Dental Provider or Delivery Center but The System of Delivery
- Build a Process Improved Community-Based Practice that Staff Participates In and Improves Patient Care
Leaders are Readers

- Lean Thinking for Healthcare
  - IHI National Forum, Dr. John Long, Dec 13, 2004
- Lean Production Simplified
  - Pascal Dennis, Productivity Press
- Mastering Patient Flow
  - Elizabeth W. Woodcock, MGMA Press
- 5 S for Operators
  - Hiroyuki Hirano, Productivity Press
- Mastering the Management System

“It’s not that I’m so smart; it’s just that I stay with problems longer.” A. Einstein
James Patsis, DDS MBA
Family First Health
Suite 100
116 S. George Street
York, PA 17401

T: 717 801 4855
F: 717 718 1317

jpatsis@familyfirsthealth.org

“Less Becomes More When You Take the Waste Out of Less”
What’s Missing…..

An Electronic Dental Performance Dashboard

| Metric                                      | Value
|---------------------------------------------|-------
| # of patients seen                         | 214   |
| Avg patients/day                           | 13.8  |
| Total days worked                          | 14.5  |
| Expected Patients Seen                     | 174.0 |
| Δ of Patients Seen (A29-32)                | 40    |
| Hours Worked                               | 109   |
| Patient seen/hr                            | 2.0   |
| No Show Rate                               | 31%   |
| Adjusted No Show Rate                      | 17%   |
| Total Patients Completed                   | 36    |
| Avg patients/day                           | 39    |
| Actual Monthly Count                       | 742   |
| Total Days of Productivity                 | 19    |
| Total Days of Provider Productivity        | 86    |
| Actual Days of Provider Productivity       | 59    |
| No. of non-Productive Provider Days        | 27    |
| Days available as Productivity             | 69%   |
| Avg Monthly Patients Seen                 | ~900-950 |

Purchase by Age Band and Gender

QuantumHMD: Preventive Screening by Product and Unit Play

My Dashboard | My Activity | Operations | CDA | Home | Phone |
Dental Trends in Community Health

- Increase Demand for Dental Care
- Decrease in Dental Providers and Allocations for Dental Care and Prevention
- Payment for Dental Services not Aligned with Escalating Costs
Today’s Healthcare Delivery

- Is Over-Engineered and Designed Upstream at the Bureaucratic or Policy level
- Organizational Silos contain Resources and Delay the Process of Healthcare Delivery
- Insufficient Resource Allocation at the Grassroots Level of Healthcare Products and Service Delivery