Objectives

- At the end of this educational activity the participants should be able to:
  - Identify importance of communication and non-adherence
  - Understand various real world factors affecting communication adherence
  - Examine those factors which can be addressed such as shared decision making
  - Advocate for better asthma care in your community
FACULTY/DISCLOSURES

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Board of Directors, Allergy and Asthma Network

Advisor: Meda, Teva, Spirometrix
Speaker: AAN, NJH, AstraZeneca, Meda, Teva
Research Grants: NIH, JPB Foundation

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- Noreen Clark, PhD (1944-2013)
- Lara Thomas, MPH
- Melissa Valerio, PhD
- Alan Baptist, MD
- Harvey Leo, MD
- Alan Luskin, MD
- Bruce Bender, PhD
- Others
Case Study 1: New Patient

You meet a 43 year old Harrisburg woman of northern European heritage with a long history of recurrent “allergic bronchitis” who was recently seen in urgent care due to a severe cough. She was given qid albuterol and oral steroids for 3 days and is improving, and is finishing a course of azithromycin and benadryl as well. Today her chest is clear and she’s not in any distress. Her history is remarkable for several emergency room visits all of which resolve with “machine breathing treatments”. She states only needs her albuterol puffer twice daily when otherwise healthy and smokes occasionally when well. She has a 25% improvement in post-bd FEV1 today.

What is your diagnosis?

What management plan do you choose…and why?

Asthma Pathophysiology

- Genetic predisposition
- Innate vulnerability
- Atopy/allergy
- Environmental triggers

- Inflammation underlies disease processes
- Phenotype varies by individual and over time

AHR=airway hyperresponsiveness

AHR=airway hyperresponsiveness

Asthma: A Chronic Inflammatory Disease of Mostly Small Airways

**Large Airways:**
- Trachea
- Bronchi
- Bronchioles

**Small Airways:**
- Terminal bronchioles
- Respiratory bronchioles

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**Classifying Asthma Severity and Initiating Treatment in Youths ≥ 12 years and Adults**

<table>
<thead>
<tr>
<th>Components of Severity</th>
<th>CLASSIFICATION OF ASTHMA SEVERITY</th>
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<tbody>
<tr>
<td></td>
<td>INTERMITTENT</td>
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<tr>
<td></td>
<td>Mild</td>
</tr>
<tr>
<td>Impairment</td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤2x/month</td>
</tr>
<tr>
<td>SABA use for sx control (not for lab)</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
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</table>
| Lung Function          | Normal FEV1 between exacerbations | FEV1 >80% | FEV1/FVC normal | FEV1 >60% but <80% | FEV1/FVC reduced 5% | FEV1 <60% | FEV1/FVC reduced >5%

<table>
<thead>
<tr>
<th>Risk</th>
<th>Exacerbations requiring oral corticosteroids</th>
<th>0-2/year</th>
<th>&gt;2/year</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Frequency and severity may vary over time for patients in any category</td>
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</tbody>
</table>

Relative annual risk of exacerbation may be related to FEV1

Recommended Step for Initiating Treatment:

- **STEP 1**: Consider short course of oral steroids
- **STEP 2**: Evaluate asthma control that is achieved and adjust therapy accordingly
- **STEP 3**: Continue with current therapy
- **STEP 4 or 5**: Consider oral corticosteroids

Stepwise Approach for Managing Asthma in Youths ≥ 12 Years and Adults

**Intermittent Asthma**
- Consult with asthma specialist if step 4 or higher care is required
- Consider consultation at step 3

**Persistent Asthma: Daily Medication**

**Step 1**
- Preferred: SABA prn

**Step 2**
- Preferred: Low-dose ICS (A)
  - Alternative: LTRA (A), Cromolyn (B), Theophylline (B)

**Step 3**
- Preferred: Medium-dose ICS (A) OR Low-dose ICS + LABA (B)
  - Alternative: Medium-dose ICS + either LTRA (B), Theophylline (B), or Zileutin (D)

**Step 4**
- Preferred: Medium-dose ICS + LABA (B)
  - Alternative: Medium-dose ICS + either LTRA (B), Theophylline (B), or Zileutin (D)

**Step 5**
- Preferred: High-dose ICS + LABA (B)
  - AND
  - Consider Omalizumab for patients with allergies (B)

**Step 6**
- Preferred: High-dose ICS + LABA + oral Corticosteroid AND Consider Omalizumab for patients with allergies (B)

Patient Education and Environmental Control at Each Step


**Asthma Insight and Management Survey: Asthma Control in the Last 4 Weeks**

**Patient Perspective**
- Well Controlled: 40%
- Completely Controlled: 31%
- Not Controlled (2%)
- Poorly Controlled (4%)
- Somewhat Controlled

**2007 NAEPP EPR-3 Control Classification**
- Very Poorly Controlled: 29%
- Not Well Controlled: 24%
- Well Controlled: 47%
Asthma 2016: Disease of Inflammation & Communication

PACE: Physician Asthma Care Education
http://www.nhlbi.nih.gov/health/prof/lung/asthma/pace/

Classifying Asthma Severity as a Basis to Initiate Asthma Therapy
Asthma Adherence 2016:
An Epidemic of Behavioral Concern

- **COMMON**
  - More than Diabetes, Hyperlipidemia, Osteoporosis, Depression, Hypertension
  - Up to 75% of Patients
  - Less about Race, Ethnicity, SES and Education

- **PERSISTENT**
  - Rarely Rigorously Addressed in Care
  - Associated with Exacerbations, Hospitalization, Death
  - Where are the Guidelines?

Patient Persistence on Medication in Chronic Diseases

*Across classes, 20% - 35% loss in patient base after fill of initial prescription*

- Multiple Sclerosis (Biologic)
- High Cholesterol (Statin)
- Hypertension (CCB)
- Osteoporosis (SERM)
- Depression (SSRI)
- Asthma (Inhaled Steroid)

Adherence Barriers in Asthma

- Less than half of patients with a new prescription for an inhaled corticosteroid actually fill their prescription.¹
- 8% to 13% of patients who filled prescription continue to refill their inhaled corticosteroid prescriptions after 1 year.²

Most Adherence is Thoughtful

Burden of Illness vs Burden of Therapy

- Missed Work/School
- Loss of sleep
- Chronic Symptoms
- Impaired QOL
- Uncertainty/Fear
- Attacks

- Having to take Rx
- Side effects
- Cost
- Inconvenience
- Appointments

Communication
Access
Some Non-Adherence is Thoughtful

Adherence = f(\text{Relationship} \times \text{Disease Burden} / \text{Therapy Burden})

\text{Relationship} = \text{communication} + \text{access}

\text{Disease Burden} = \text{severity}^* \times \text{deviation in QoL}^{**} + \text{cost}^{(\text{direct} + \text{indirect})}

\text{Therapy Burden} = \{(\text{cost} + \text{inconvenience} + \text{side effects}^*) / \text{effectiveness}^*\}

It’s not just patients and medication. It’s action/lifestyle plans and office visits, ICS, IT, Biologics and Environmental Control. 

\textit{Clinicians and Payers can be non-Adherent, too!}

The System Puts Up Barriers

• 4 areas of Post-ED understanding
  – Diagnosis
  – ER treatment
  – Home care (meds, follow-up)
  – Warning signs for ER return

• 78% didn’t understand one
• 50% didn’t understand two

Physician-Patient Discordance

What medical school did a patient go to?

- ½ the time patients and physicians disagree on what the problem is.
- ¼ of all problems mentioned by the patient are not recognized at all by the physician.
- > 2/3 of the time patients and physicians disagree on what the goals of treatment are.
- Patients must be involved in all aspects of care, from defining the problem to determining therapy.

Patient-Centered Collaborative Care

‘If physicians view themselves as experts whose job is to get patients to behave in ways that reflect that expertise, both will continue to be frustrated. . . .’

‘Once physicians recognize patients as experts on their own lives, they can add their medical expertise to what patients know about themselves to create a plan that will help patients achieve their goals.’

Maxims on Adherence

- The less patients have to do, the more likely they are to do it
- To know is not to do
- Anxiety and depression decrease adherence
  - A lot, so look for it
- Physician access and response are determinants of adherence
- Cost is an increasingly important burden
- The Clinician is not the patient’s parent

Maxims on Adherence

- Excellence in medical therapy is worthless if patient doesn’t take medication
- Clinicians can’t predict who will and won’t
- Most MDs believe they are good communicators
- Most patients feel communication is inadequate
- The system, the doctor and the patient must ALL assume responsibility for solving the problem
- We don’t do Shared Decision Making very well
So What Must the System Do?

- Promote, provide and pay for education that is interactive
- Formulary decisions to include adherence factors
- Co-pays used to promote effective care
- Facilitate depression screening and Rx
- Improve access to skilled clinicians
- Facilitate communication and Shared Decision Making with great Decisional Aids

Medication Use In Asthma

The wrong therapy is the one which failed!

P.S.: It won’t work if they don’t take it.
P.P.S.: They won’t take it if they don’t get it.
   (Literally and Figuratively)
We have altered the social contract between patients and doctors

- We no longer live in the community we treat.
- We fail to understand the patient and their lives and effects of the disease and its treatment on them.
- We think that knowledge and education and technology is sufficient to change behavior (ours and theirs) and improve outcomes.

The Clinicians Job

- Get the Patient Preference Info:
- What bothers you about the asthma?
- Do you think you need better asthma control?
- What are you looking for from the therapy?

Clinicians should consider what features of the available therapies and side effect profiles meet the patient’s needs with Decisional Aids and Shared Decision Making
Creating a new system

- Specialty controlled triage
  - Focus on high risk populations
  - Modern tools, including depression & adherence
- Give PCP limited, straightforward disease management skills
  - Use technology to assist at Point Of Service
- Teach and foster Behavioral Medicine
- Provide a system which facilitates/rewards
- Monitor outcomes and redirect patients
  - Use technology to monitor and advise

An office visit is NOT a final exam!
As long as the patient and clinician…

- Have an on-going relationship
- Agree upon goals
- Engage in on-going monitoring and shared decision making
- Understand the heterogeneity of response and expect the possibility of non-response and heightened susceptibility to adverse effects
Asthma Self-Management Education at Multiple Points of Care

Monitoring Patient–Provider Communication and Patient Satisfaction

Monitor at each visit:
- Adherence to the regimen
- Inhaler technique
- Side effects of medications using SDM
- Patient satisfaction with asthma control ARC
- Patient satisfaction with quality of care

Negative attitude toward medication and/or reluctance toward self-management are risk factors for severe exacerbations

Education Beyond the Patient: Provider Collaboration and Training

According to the NHLBI Guidelines, asthma providers should consider:

- Implementing multidimensional, interactive clinician education in asthma care
- Participation in programs to enhance skills in communicating with patients
- Development and use of clinical pathways for management of acute asthma
- Developing, implementing, and evaluating system-based interventions to support clinical decision-making and to support quality care for asthma


Potential Barriers to Self-Management and Asthma Control
Health Literacy is a Key Factor in Chronic Disease Management

- Health literacy is the ability to read, understand, and act on health care information.1
- Health literacy affects people’s ability to use SDM to:
  - Navigate the healthcare system, including filling out complex forms and locating providers and services
  - Share personal information, such as health history, with providers
  - Engage in self-care and chronic-disease management
  - Understand mathematical concepts such as probability and risk
- Four literacy areas3:
  - Visually literate
  - Computer literate
  - Information literate
  - Numerically/computationally literate


Consequences of Low Health Literacy

- According to the American Medical Association, “poor health literacy is a stronger predictor of a person’s health than age, income, employment status, education level, and race”
- Low health literacy is associated with a greater risk of preventable adverse health outcomes, including:
  - Greater healthcare utilization
  - Worse disease outcomes
  - Higher risk of death; more emergency room visits and hospitalizations
  - Taking medicines incorrectly
  - Less use of preventative health services (eg flu shot)

Health literacy may not be related to years of education or general reading ability

Assessing Health Literacy Deficiencies

How many of you feel your patients don’t always fully understand information they receive?

- Nearly one of every two patients (46%) misunderstood one or more dosage instructions¹

Do you assess your patients’ health literacy?

Indicators of Limited Health Literacy

Behaviors that may suggest literacy problems¹
- Bring reading materials closer to their eyes or point with a finger while reading
- Eyes glance over the page without truly focusing on words
- Provide incomplete medical history or check items as "no" to avoid follow-up questions
- Miss appointments
- Make errors regarding their medication
- Identify medication by color, size, and shape instead of reading label
- Signs of nervousness, confusion, frustration, and even indifference
- Withdrawal or avoid situations of complex learning
- Give incorrect answers when questioned about what they have read

Common excuses patients may use
- "I forgot my glasses"
- "I’ll read this when I get home."
- "Can you read this to me?"
- "Let me bring this home so I can discuss it with my children."


**Tips/Techniques: Helping to Increase Patients’ Health Literacy via Proactive Care Management**

- Slow down, speak slowly, and spend extra time with each patient.
- Use plain, non-medical language.
- Use visual aids such as pictures or videos.
- Limit the amount of information and repeat it.
- Ensure medication dosing instructions are clear.
  - Poor example for dosage instructions: Take 2 tablets by mouth with liquids.
  - Possible interpretations: Take 2 tablets twice-daily or take 1 tablet once-daily.
- Use a “teach back” or “show me” approach to confirm understanding.
  - Have patient explain information back to you to ensure he or she understands.
- Create a shame-free environment: encourage questions.


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**Adherence is Not Solely a Patient Problem**

- WHO definition: “the extent to which a person’s behavior including taking medication, following diet plans, and executing lifestyle modifications, correspond with the agreed recommendations from a health care provider”
- Requires mutual consent to the recommendations by the 2 involved parties, patient and physician.
- Reasons for non-adherence:
  - Social and cultural barriers
  - Attitude
  - Physician attitude and behavior
  - Patient perception
  - Economics
  - Poor health literacy

**Physicians can enhance communication quality, thus promoting improved patient adherence**

Interactions Among Patients, Providers, and Healthcare Systems May Impede Adherence to Therapy

**Poor Provider-Patient Communication**
Patient has a poor understanding of the disease, benefits/risks of treatment, proper use of medication

**Patient’s Interaction with Healthcare System**
- Poor access or missed clinic appointment
- Poor treatment by clinic staff
- Poor access to medications
- Switching to a different formulary
- Inability of patient to access pharmacy
- High medication costs

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Improving Adherence: Tips from the Guidelines

**Assess And Encourage Adherence During All Asthma Visits**

- Use effective techniques to promote open communication
- Begin each visit by asking about the patient’s concerns and goals
- Ask specifically about any concerns about medications/treatment
- Assess patient’s perception of their asthma severity and how well it is controlled
- Assess patient’s level of social support; encourage family involvement
- Assess levels of stress, family disruption, anxiety, and depression associated with asthma and its management
- Assess patient’s ability to adhere to the written action plan

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What the Provider Might Do to Address Adherence

- During each visit and patient contact, emphasize benefits of therapy and impact of non-adherence
- Simplify the treatment plan and instructions to patient
- Actively listen with improved non-verbal communication
- Ask open-ended questions
- Look for signs of non-adherence—for example:
  - Do the patient’s asthma symptoms fail to improve despite appropriate therapy?
  - Is the patient missing appointments?
  - Does pharmacy report patient is not refilling prescription?
- Patient demonstrations of medication administration
- Suggest patient uses some type of medication-taking system or reminder
- Seek assistance from family members, friends, community services to support patient
- Look Forward Approach—don’t focus on the past; develop goals with the patient for future success (shared decision making)

Steps to develop an Active Partnership with Patient and Family

- Establish open communications
  - Identify and address patient and family concerns about asthma and asthma treatment
  - Identify patient/parent/child treatment preferences regarding treatment and barriers to its implementation
  - Develop treatment goals together with patient and family
  - Encourage active self-assessment and self-management of asthma
- Encourage adherence by:
  - choosing a treatment regimen that achieves outcomes and addresses preferences that are important to the patient/parent (Evidence B)
  - reviewing the success of the treatment plan with the patient/parent at each visit and making adjustments as needed (Evidence B)
  - Tailor the asthma self-management teaching approach to the needs of each patient
  - Maintain sensitivity to cultural beliefs and ethnocultural practices (Evidence C)
Some Strategies the Group Practice/System Might Use to Improve Adherence

- Continually assess and strive for an atmosphere that fosters patient-centric care
- Track adherence rates to medication, ED visits
- Evaluate data to identify barriers to adherence
- Conduct patient and provider surveys to identify potential barriers to adherence/optimal patient care
- Institute programs that encourage adherence
- Promote patient education that provides pathways to adherence
- Implement guidelines for managing non-adherence

Motivational Interviewing: A Unique Technique for Assessing and Addressing Adherence

Client-centered directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence

<table>
<thead>
<tr>
<th>O</th>
<th>Open-ended Questions</th>
<th>Questions that cannot be answered with a “yes,” “no,” or “three times a week,” etc</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Affirmations</td>
<td>Make sure they are congruent and genuine to build rapport</td>
</tr>
<tr>
<td>R</td>
<td>Reflective Listening</td>
<td>Key to success: listen carefully to your patients to understand what has and hasn’t worked</td>
</tr>
<tr>
<td>S</td>
<td>Summaries</td>
<td>Reflect back to your patient what he/she has been saying</td>
</tr>
</tbody>
</table>

George Bernard Shaw said:
“The single biggest problem with communication is the illusion that it has occurred.”

Key strategies to facilitate good communication

• A congenial demeanor (friendliness, humor and attentiveness)
• Allowing the patient to express their goals, beliefs and concerns
• Empathy, reassurance, and prompt handling of any concerns
• Giving encouragement and praise
• Giving appropriate (personalized) information
• Providing feedback and review
Specific strategies for reducing the impact of impaired health literacy

- Order information from most to least important
- Speak slowly and use simple words (avoid medical language, if possible)
- Simplify numeric concepts (e.g. use numbers instead of percentages)
- Frame instructions effectively (use illustrative anecdotes, drawings, pictures, table or graphs)
- Confirm understanding by using the ‘teach-back’ method (ask patients to repeat instructions)
- Ask a second person (e.g. nurse, family member) to repeat the main messages
- Pay attention to non-verbal communication by the patient (e.g. poor eye contact)
- Make patients feel comfortable about asking questions

Steps to develop and Active Partnership with Family

- Identify and address patient and family concerns about asthma and asthma treatment
- Identify patient/parent/child treatment preferences regarding treatment and barriers to its implementation
- Develop treatment goals together with patient and family
- Encourage active self-assessment and self-management of asthma

Encourage adherence by:

- choosing a treatment regimen that achieves outcomes and addresses preferences that are important to the patient/parent (Evidence B)
- reviewing the success of the treatment plan with the patient/parent at each visit and making adjustments as needed (Evidence B)
- Tailor the asthma self-management teaching approach to the needs of each patient
- Maintain sensitivity to cultural beliefs and ethnocultural practices (Evidence C) 2007 Guidelines
Monitoring Patient Provider Communication and Satisfaction.
Filled out before visit!

- ‘What questions have you had about your child’s asthma daily self-management plan and action plan?’
- ‘What problems have you had following the daily self-management plan? The action plan?’
- ‘How do you feel about making your own decisions about therapy?’
- ‘Has anything prevented you from getting the treatment you need for your asthma from me or anyone else?’
- ‘Have the costs of your child’s asthma treatment interfered with your ability to get asthma care?’
- ‘How satisfied are you with your asthma care?’
- ‘How can we improve your asthma care?’


Communication isn’t always easy!

- A warm smile moves mountains
  Greet and express interest in your patient
  Use tone, pace, eye contact and posture to show care and concern
  Use simple language and basic concepts
  Don’t overload the patient or parent
  Be sensitive to cultural differences

Promoting Adherence and Effective Communication: Summary

- Patients often take less than half of their prescribed controller medication, and surprisingly many stop taking their controller medication altogether after an initial filling at their pharmacy.
- Decreasing adherence contributes to poor control and increased exacerbation risk, in turn driving up healthcare costs.
- Complex and time-consuming adherence interventions are difficult to integrate into everyday clinical practice.
- Evidence-based, time-efficient strategies can be adopted by most providers to increase patient adherence.
- Successful strategies utilize principles of patient-centered care and effective communication, including collaboration on treatment goals and plans.

ARC: Asthma Report Card

Diagnosis
- Symptom control & risk factors
- Inhaler technique & adherence
- Patient preference

Symptoms
- Exacerbations
- Side-effects
- Patient satisfaction
- Lung function

Asthma medications
- Non-pharmacological strategies
- Treat modifiable risk factors

Review Response

Assess

Adjust Treatment
Key Challenges Have Been Identified for Achieving Better Quality of Care

- Cost & time
- Adherence & health literacy of patients
- Monitoring, follow-up, & patient tracking
- Need for adequate standardized chronic disease guidelines
- Need for reliable outcome measures

“In chronic disease management, the gap is between what we know and what we do.”


What Could an Ideal Approach to Meet These Challenges Look Like?

- Eliminate barriers to care
- Use a team approach using PBL
- Utilize advanced information systems
- Consider more functional offices
- Support a whole-person orientation with EDM
- Provide care in a community context
- Focus on quality and safety
- Communicate available services and resources

NJH Adherence/Communication Team-Based Approach to Managing Patients With Asthma

“In chronic disease management, the gap is between what we know and what we do.”
Team-Based Care: Every Member Plays a Part

**Shared Responsibilities to Reach A Common Goal**

<table>
<thead>
<tr>
<th>Taught patient to monitor for and avoid triggers</th>
<th>Motivational interview</th>
<th>Checked medication adherence</th>
<th>Updated patient portal</th>
<th>Distributed educational tools</th>
<th>Lifestyle education (diet/exercise)</th>
<th>Outreach to patient after appointment</th>
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</thead>
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<tr>
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*Sample Task List

Utilize face-to-face communication, e-mails, phones, and electronic health records to streamline, to educate, to succeed

Create Your Own Journey to better Communication/Adherence

- Every asthma patient’s journey (and yours!) will be different; however, common themes may exist
- Consider your patients’ perspectives and ways to break down barriers **using Shared Decision Making Aids**
  - Assess health literacy, worry, confusion, language/cultural issues, poor adherence, support system
- Explore options to motivate and improve self-management
- Is each patient taking medications properly and monitoring symptoms and use of reliever regularly and accurately?
- Consider your office environment: Is it user-friendly?
- The whole is greater than the sum of its parts: Consider group education and group appointments as options
Key Points on Adherence

• Patients often take less than half of their prescribed controller medication, and surprisingly many stop taking their controller medication altogether after an initial filling at their pharmacy.
• Decreasing adherence contributes to poor control and increased exacerbation risk, in turn driving up health-care costs. Most of the time!
• Complex and time-consuming adherence interventions are difficult to integrate into everyday clinical practice.
• Evidence-based, time-efficient strategies can be adopted by most providers to increase patient adherence.
• Successful strategies utilize principles of patient-centered care and effective communication, including collaboration on treatment goals and plans.
• New strategies-

Take Home Messages about Adherence

• Poor adherence to treatment of chronic diseases is a worldwide problem of striking magnitude
• The impact of poor adherence grows as the burden therapy grows and then chronic disease grows worldwide
• The consequences of poor adherence to long-term therapies are poor health outcomes and increased health care costs
• Improving adherence also enhances patients’ safety
• Adherence is an important modifier of health system effectiveness
• Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments”1
Take Home Messages about Adherence

• Health systems must evolve to meet new challenges
• Patients need to be supported, not blamed
• Adherence is simultaneously influenced by several factors
• Patient-tailored interventions are required with SDM
• Adherence is a dynamic process that needs to be followed up
• Health professionals need to be trained in adherence-SDM
• Family, community and patients’ organizations: a key factor for success in improving adherence
• A multidisciplinary approach towards adherence is needed

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THANK YOU