How are they doing this in the US? The many roles of the Hospice and Palliative Care Pharmacist

Bridget Scullion, PharmD, BCOP
Dana-Farber Cancer Institute, Boston, MA
Director, Clinical Pharmacy Services
President, Society of Palliative Care Pharmacists
Learning Objectives

- Distinguish pharmacy education and practice in the United States
- Explore the varying pharmacist roles in the hospice and palliative care setting
- Identify opportunities for optimization of the pharmacists role in HPM
Distinguish pharmacy education and practice in the United States
Pharmacy Education in the United States

- Professional degree (PharmD) is a 6-8 years (0-6 programs vs. 4 year graduate programs)
  - Pharmacology
  - Clinical assessment, monitoring and treatment of disease
  - Supervised direct patient care activities
  - Patient education

- Pharmacists may also complete 1-2 years of post graduate residency training
  - PGY1 pharmacy residency
  - PGY2 specialty residency in palliative care/pain management

- Other avenues:
  - Master of Science in Palliative Care is available to interdisciplinary team
  - Traineeships
  - Fellowships
  - Certifications (e.g., Certified Pain Educator)
Progression of Pharmacy Practice

Figure 1: Level of Professional Interaction Reflects Degree of Trust Between the Pharmacist and the Prescriber

- Pharmacist dispenses prescriber’s prescriptions
- Pharmacist and prescriber ask questions and exchange information
- Pharmacist makes recommendations; prescriber strongly considers and often accepts recommendations
- Prescriber delegates responsibilities under a collaborative practice agreement

Pharmacy Practice Continues to Evolve

The mission of the profession of pharmacy is to improve public health through ensuring safe, effective and appropriate use of medications.

Contemporary pharmacy practice reflects and evolving paradigm from one in which the pharmacist primary supervises medication distribution and counsels patients, to a more expanded and team-based clinical role providing patient-centered medication therapy management, health improvement, and disease prevention services.

Scope of Practice

- Boundaries within which a health professional may practice
- Scope of practice for pharmacists in the US is established by state legislatures and regulated by the State Boards of Pharmacy
- Pharmacists provide a broad spectrum of services
  - Health and wellness testing
  - Managing chronic diseases
  - Medication management
  - Immunization administration

American Pharmacists Association
Collect
- Medication list, medication use history, herbal and dietary supplement use
- Medical history, test results physical assessment findings
- Lifestyle, preferences, functional goals, socioeconomic factors

Assess
- Each medication for appropriateness, effectiveness, safety and patient adherence
- Immunization status, preventative care needs

Plan
- Address medication-related problems and optimize medication therapy
- Set therapeutic goals
- Engage, Educate and Empower the patient
- Support care continuity

Implement
- Initiates, modifies, discontinues or administers medication as authorized
- Provides education to patient/caregiver
- Coordination of care

Follow-up: Monitor and Evaluate
- Assess medication appropriateness, effectiveness, safety and patient adherence
- Assess clinical endpoints and outcomes
Clinical Pharmacy Practice

- Clinical pharmacists are the practitioners who focus on optimizing medication therapy and who use therapeutic knowledge, experience and judgment to ensure optimal patient outcomes through comprehensive medication management
  - Patient assessment
  - Medication therapy evaluation
  - Development and implementation of a plan of care
  - Follow-up evaluation and monitoring with appropriate documentation

American College of Clinical Pharmacy: https://www.accp.com/docs/positions/misc/scopeofpractice.pdf
Collaborative Practice Agreements (CPAs)

Collaborative Drug Therapy Management (CDTM)

- 48 states and the District of Columbia authorize pharmacists to enter collaborative practice agreements with a physician or another prescriber
  - Enable pharmacists to provide a wide range of services including initiation, monitoring and modification of a patient’s drug therapy
  - In 31 states, pharmacists are also allowed to order and interpret lab tests
  - Indian Health Service, Department of Veterans Affairs and Department of Defense have utilized pharmacists for the management of chronic conditions for over 40 years
  - California (1981) and Washington (1979) were the first to implement CDTM

American Pharmacists Association
Pharmacy Board Certification

- Board of Pharmacy Specialties was established in 1976 and is now the primary post-licensure certification agency worldwide
  - Establishes standards for certification and recertification of pharmacists in recognized pharmacy specialty practices
  - BPS certification is a voluntary process that confirms a pharmacist’s education, experience, knowledge and skills in a particular practice are beyond what is required for licensure
- 11 BPS specialties are available
  - Nuclear Pharmacy was established in 1978 followed by nutrition Support Pharmacy and Pharmacotherapy in 1988
  - Oncology 1996
  - Cardiology and Infectious disease 2018
  - SPCP is advocating for Palliative Care Specialty certification

https://www.bpsweb.org/about-bps/history/
Figure 1. BPS Growth by Specialty

Pharmacists Certified by the Board of Pharmacy Specialties

Summary sheet totals

The graph below illustrates the numbers of pharmacist specialists holding BPS certification in each of the years noted in the six recognized areas for which testing programs have been implemented.

*Does not remove dual certifications
Professional Organizations support Palliative Care Pharmacy Practice

- American Society of Health-System Pharmacists (ASHP)
  - Accreditation of PGY2 Pain Management and Palliative Care Pharmacy Residencies
  - ASHP Guidelines on the Pharmacist’s Role in Palliative and Hospice Care
  - Pain and Palliative Care Section Advisory Group (SAG)
- American College of Clinical Pharmacy (ACCP)
  - Pain and Palliative Care PRN
- American Academy of Hospice and Palliative Medicine
  - Pharmacotherapy SIG
- Society of Palliative Care Pharmacists (SPCP)
- National Coalition for Hospice and Palliative Care (NCHPC)
  - SPCP is one of 10 professional organizations
  - Clinical Practice Guidelines for Quality Palliative Care
Explore the varying pharmacist roles in the hospice and palliative care setting
ASHP Statement Graduates to a Guideline

- 2002 ASHP Statement on the Pharmacist’s Role in Hospice and Palliative Care had a narrow scope
- 2016 Guideline extends beyond the previous publication to define the role of the pharmacist

Essential Clinical Roles
- Direct patient care
- Medication order review and reconciliation
- Education and medication counseling

Essential Administrative Roles
- Medication use policies/guidelines
- Medication supply chain management

Desirable Clinical and Administrative Roles
- Advanced practice roles
- Education
- Scholarship
- Interdisciplinary Leadership

---

ASHP Guidelines on the Pharmacist’s Role in Palliative and Hospice Care

Palliative care arose from the modern hospice movement and has evolved significantly over the past 50 years. Numerous definitions exist to describe palliative care, all of which focus on progressively addressing suffering. The World Health Organization and the U.S. Department of Health and Human Services both stipulate the tenets of palliative care to include a patient-centered and family-centered approach to care, with the goal of maximizing quality of life while minimizing suffering. In its clinical practice guidelines, the National Consensus Project for Quality Palliative Care of the National Quality Forum (NQF) describes palliative care as “patient and family-centered care that optimizes quality of life by anticipating, preventing, and treating suffering . . . throughout the continuum of illness . . . addressing the physical, intellectual, emotional, social, and spiritual needs and to facilitate patient autonomy, access to information, and choice.” NQF further specifies the foundation of palliative care to include professional and family collaboration, the availability of services regardless of pursuit of curative or life-extending care, and, most importantly, the provision of care co-ordinated by an interdisciplinary team. The continuum of care provided by palliative care pharmacists (Figure 1) incorporates the concepts that curative and palliative care should coexist and that hospice care is an extension of palliative care that occurs when curative care is no longer part of the patient’s plan of care. The practice of palliative care, while rooted in traditional hospice and bereavement and oncology programs, has changed dramatically in its delivery, competency assessment, and methods for preparing future members of the interdisciplinary team. Practicing health professionals obtain the necessary skills and knowledge for participation in the interdisciplinary delivery of palliative care via an expanding specialty area, including internal medicine, geriatrics, oncology. Numerous efforts to enhance professional education on palliative care largely drove its eventual recognition as a medical subspecialty in 2006. As the model of palliative care has progressed, so too has each team member’s potential for contribution. Despite representation within the first hospice demonstration project in the United States, participation of the pharmacist as an essential member of the interdisciplinary team has been traditionally overlooked. Evidence of the pharmacist’s contributions to the delivery of palliative care and supportive care services beyond the original role of medication dispensing and compounding has garnered growing recognition across numerous practice settings. Perhaps no other practice setting presents as diverse a collection of potential roles and responsibilities for the affiliated palliative and hospice care (PHC) pharmacist. Here, the PHC pharmacist may support the PHC services in an administrative role (policy and procedure, formulary management), in a consultative role (order set development, treatment algorithm development, best practices education), and in advanced clinical practice (medication therapy management services, pain and symptom management consultations, and interdisciplinary team participation).
### Table 1. Essential Clinical and Administrative Roles, Practice Activities, and Examples of Tasks, Skills, and Knowledge of the PBC Pharmacist

**Role and Specialty Practice Activity**

<table>
<thead>
<tr>
<th>Example(s) of Tasks, Skills, and Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize the outcomes of symptom management and palliative care through the expert provision of evidence-based, patient-centered medication therapy as an integral part of an interdisciplinary team.</td>
</tr>
<tr>
<td>Serve as an authoritative resource on the optimal use of medications in symptom management and palliative care.</td>
</tr>
<tr>
<td>Anticipate transitions of care when recommending, initiating, modifying, or discontinuing pharmacotherapy for pain and symptoms.</td>
</tr>
</tbody>
</table>

**Medication order review and reconciliation**

- Assist with the preparation and dispensing of medications for symptom management and palliative care patients following existing standards of practice and the organization’s policies and procedures.
- Contribute to the work of the team that secures access for drugs used in a patient’s regimen, including facilitation of REMS programs.
- Assist in drug shortage management, including patient-focused and supply/management decisions.
- Employ medication adherence strategies.
- Perform opioid conversions.
- Conduct clinical medication regimen reviews to identify and resolve medication-related problems associated with symptom management.

**Education and medication counseling**

- Demonstrate excellence in the provision of medication counseling to patients, caregivers, and families.
- Ensure safe and legal disposal of medication.

**Administrative roles**

- Ensure safe use of medications in the treatment of pain and symptoms.
- Medication supply chain management.
- Pharmacy and therapeutics committee implementation and participation.
- Medication formulary and therapeutic substitution/interchange policy development and evaluation.
- Development of medication-use policies and procedures.
- Support development of medication-use algorithms that follow evidence-based best practices.
- Perform continuous quality improvement reviews toward medication-use compliance.
- Medication administration management (e.g., pumps, dosage forms, stock medication).
- Safe and effective disposal of medications.
- Support medication contract negotiations with pharmacy vendors (e.g., PBMs, retail pharmacies, purchasing groups, wholesalers).

### Table 2. Desirable Clinical and Administrative Roles, Practice Activities, and Examples of Tasks, Skills, and Knowledge of PBC Pharmacist

**Desirable Role and Specialty Practice Activity**

<table>
<thead>
<tr>
<th>Example(s) of Specific Skills, Tasks, and Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct advanced pain and symptom assessment, including comorbid conditions.</td>
</tr>
<tr>
<td>Establish and maintain a collaborative practice agreement with managing medical practitioner.</td>
</tr>
<tr>
<td>Initiate, modify, and discontinue medication therapy.</td>
</tr>
<tr>
<td>Monitor medication therapy using patient and caregiver history and order, recommend, or interpret laboratory and test results.</td>
</tr>
<tr>
<td>Develop an accountable role within the PBC interdisciplinary team.</td>
</tr>
<tr>
<td>Thoroughly understand scope of practice and roles of nonpharmacist members of the PBC team.</td>
</tr>
<tr>
<td>Participate in or lead family meetings.</td>
</tr>
<tr>
<td>Establish goals of care and educate patient and family on medication therapy decisions (e.g., discontinuation of futile or nonessential medication).</td>
</tr>
<tr>
<td>Participate in or lead decisions on hospice or outpatient palliative care appropriateness and referral.</td>
</tr>
<tr>
<td>Guide transition of care.</td>
</tr>
<tr>
<td>Assist in health-system policy as it relates to PBC.</td>
</tr>
<tr>
<td>Educate patients, caregivers, and families regarding medications.</td>
</tr>
</tbody>
</table>

**Education**

- Develop health professions students’ understanding of PBC.
- Develop practicing health professionals’ understanding of PBC.

**Scholarship**

- Contribute to the body of knowledge of PBC via writing, speaking, or research.
- Conduct and disseminate research via publication, poster presentation, and lecturing.
- Participate in development of clinical guidelines, guidance documents, or treatment algorithms.

**Administrative roles**

- Practice development and management.
- Interdisciplinary leadership.

**Direct patient care**

- Complete thorough history and symptom analysis.
- Perform limited physical examination.
- Prescribe, order, or recommend medication therapy in the management of symptoms and pain using evidence-based medicine when available.
- Order or recommend and interpret labs or tests.
- Utilize or recommend validated patient-specific, uni- or multidimensional assessment tools and screens (e.g., Patient Health Questionnaire, McGill Pain Questionnaire, Edmonton Symptom Assessment Scale, Beck Depression Inventory).
- Coordinate seamless transitions of care from hospital to home, home to hospital, hospital to LTC facility, LTC facility to hospital, or any setting to hospice.
- Develop institutional, evidence-based, or guideline-driven policies, order sets, and protocols.
- Create complex care that support the daily practice and growth of the PBC role.

- Develop a collaborative practice agreement that promotes patient-centered care and supports practicing at the top of pharmacy license.

PBC = palliative, supportive, and hospice care; REMS = risk evaluation and mitigation strategy; PBM = pharmacy benefit manager.
Palliative Care Pharmacy Practice at DFCI

- Four clinical pharmacists cover a variety of clinical services
  - IPCU (Intensive Palliative Care Unit) (1)
    - Rounds daily with a team of MDs, PAs, SW, RN
    - Precepts pharmacy students from 2 area schools of pharmacy
  - Inpatient Palliative Care Consult Team (1)
    - Daily patient case review and pager coverage for consultation
  - Outpatient Palliative Care Clinic (2)
    - Morning huddle with team to identify patients with greatest medication management needs
    - Joint visits in which pharmacist performs symptom assessment and makes medication management recommendations.
    - Future Collaborative Drug Therapy Management Practice (2019)

- PGY2 Pain Management and Palliative Care Resident (1)
  - Rotates through all of the above, plus hospice, ambulatory and inpatient pain management settings
Provides operational and clinical support for patient care as it relates to symptom management, clinical intervention, and medication management.

- Active participant in IDT meetings for home care, facilities, and IPU (in-patient unit) patients
- Formulary and clinical policy institution and management (use of inotropes in the home hospice setting, palliative sedation, management of hypoglycemia in the in-patient hospice, use of medical marijuana in the hospice patient, macy catheter use and compatibility of medications in the rectum) with collaboration from providers
- Maintaining the pharmacy budget in a non-profit setting while adhering the CMS guidelines and the hospice pricing model for medications
- Pharmacist liaison for area hospitals for referrals
- Clinical pharmacist support for all clinical staff regarding titration and instituting of comfort medications at the end-of-life so that each patient can truly make the best of every day.
- Education to various staff members on current events applicable to hospice (passage of the opioid law which will now allow hospice nurses to destroy medications after a patient's death, calculations, deprescribing, medical marijuana use and what it means for hospice patients)
- Preceptor to pharmacy residents and students
Palliative Care Pharmacist Consultant for Large National Hospice Chain

- National Pharmacy Consultant
  - 24/7 call- available to nurses and physicians
  - Pain and symptom management
  - Opioid conversions
  - All methadone dosing
  - Suspicion of drug abuse/diversion
  - Policies
  - Education
Clinical Pharmacists provide medication related services to hospices through Pharmacy Benefits Managers (PBMs)

- Medicare Hospice Benefit requires that hospice consults with health professionals with education and training in drug management to ensure that the patients' needs are met.
- Most hospices cannot afford to employ a pharmacist full-time and instead contract with a PBM to provide such clinical consultations.
- These pharmacists can provide medication cost containment (formulary management), medication therapy management (MTM), and clinical education.
  - Medication profile review includes assessment of effectiveness of drug therapy, side effects, drug interactions, duplicate drug therapy, and laboratory monitoring where appropriate.
Director of Drug Information
PBM Hospice Pharmacy Services

- Drug Information responses
- White papers
- Patient handouts
- Webinars
- Clinical content for client newsletter
- Live clinical in-services
- Manuscripts
- Research and QA projects
- APPE and PGY2 program coordination

- Hospice and palliative care focused literature abstracting service (HospiLink)
- Hospice specific content review and testing for EMR
- Coordination of clinical pharmacists performing drug profile review for hospice clients
- Oversight of 24/7 clinical consults on patient care and symptom management
School of Pharmacy Faculty with Clinical Palliative Care Practice

- Teaching and research in areas of pain and palliative care
- Member of Pain Committee at medical center; develop protocols and guidelines
- Part-time clinical support to an Academic Medical Center Palliative Care team
  - Ambulatory setting
    - Independent patient visits or with social work
    - Initiating medications, dose adjustments, tapering/discontinuing medications as appropriate
  - Inpatient
    - Team support- optimizing symptoms through medication management; addressing non-adherence coordinating formulary and medication insurance issues; reduce polypharmacy; identifying and avoiding drug interactions, dose adjustments based on organ function; educating patients, caregivers and healthcare providers
    - Independent provider- patient assessment alone or with social work, present patient case to team, make recommendations to primary teams, document in EMR, assist with medication orders as needed
Clinical Pharmacy Specialists funded by University

- Clinical Pharmacy Specialist: Outpatient Supportive and Palliative Care Clinic
  - Routine assessment of all drug therapy for symptom control optimization and any opportunities for deprescribing
  - Opioid risk assessment and management, including risk of opioid-induced respiratory depression and co-prescribing of naloxone
  - PMP review, UDS interpretation, assistance with insurance PAs
  - Precept pharmacy students, residents, palliative medicine fellows and other medical learners
  - Develop and implement drug policy and procedures
  - Develop and implement patient education

- Clinical Pharmacy Specialist: Inpatient Supportive and Palliative Care Consult Service
  - Round on the inpatient service on a PRN basis and attend daily sign-out rounds with the full PC team
  - Routine assessment of all drug therapy for symptom control optimization and any opportunities for deprescribing
  - Precept pharmacy students, residents, palliative medicine fellows and other medical learners
  - Develop and implement drug policy and procedures
Scholarly Activities

- Pharmacists serving as faculty in Fellowship programs
  - Performance evaluation committee
  - Didactic lectures
- Integrated palliative care principles throughout didactic PharmD curriculum
- Developed 17 credit hour palliative care certificate for pharmacy students
  - 10 hours didactics
  - Continuous Professional Development
  - Advance Practice Pharmacy Experience- pain management, palliative care or hospice
  - Goal to expand to interprofessional program
- PGY2 Pain Management and Palliative Care Pharmacy Residency
Palliative Care Pharmacist Roles at a Large Academic Medical Center

- Palliative care trained pharmacist for inpatient oncology patients at a nationally recognized cancer hospital daily rounds with the interdisciplinary inpatient palliative care team to support optimal patient care outcomes
  - Ensure appropriate selection of supportive care medications given the patients current disease status, expected disease trajectory, specific pharmacokinetic profile, comorbid conditions, and current medication profile. Many patients are on phase 1 trial medications making our job vital to ensure the supportive care medications do not interfere with the trial medications
  - Provide support to our specialty trained oncology pharmacists for the primary palliative care needs for their patients
  - Provide support for our university and heart hospital palliative care teams
  - Provide regular continuing education/formal presentations/ground rounds to nurses, nurse practitioners, pharmacists, and physicians on the appropriate use of medications in palliative care and hospice patients
  - Recognized as opioid experts across the hospital system and are involved in developing and editing opioid procedures and policies as well as opioid related research across the hospital
  - Directly involved in precepting/training various disciplines within palliative care
  - Assist in ensuring medication access and continuity at points of transitions of care - assisted by working with the outpatient palliative care pharmacist
Palliative Care Pharmacist Roles at a Large Academic Medical Center

- Palliative care trained pharmacist in **outpatient cancer palliative care clinic**
  - Ensure appropriate selection of supportive care medications given the patients current disease status, expected disease trajectory, specific pharmacokinetic profile, comorbid conditions, and current medication profile. **Many patients are on phase 1 trial medications making our job vital to ensure the supportive care medications do not interfere with the trial medications.**
  - Assist in implementation of universal opioid precautions in the outpatient cancer palliative care population - identify and talk to patients/families about the appropriate use of naloxone; recognized as the experts in evaluating urine drug testing results thus we review each and every UDT and provide a recommendations to the providers
  - Provide patient follow up via phone calls to check on patients with complex or high acuity pharmacological regimens
  - Support the outpatient oncology providers with the primary palliative care needs of their patients (give recommendations when requested on how to modify symptomatic regimens)
  - Support drug information needs for the outpatient interdisciplinary palliative care team
  - Shared visits with the physicians on complex patients
Pharmacist and Social Worker led Palliative Care Consults provide skilled symptom management and advanced care planning

- Visionary approach to expand access to palliative care services
- Case series of 8 patients who were managed by the PharmD/SW duo for at least the first 72 hours of palliative care consultation
- Pharmacist performed medication initiation, titration and monitoring, opioid risk screening, substance abuse screening and counseling, symptom identification and treatment, medication reconciliation, de-prescribing and family meetings
- LICSW performed psychosocial assessment, brief counseling, advance directive completion, family meetings, non-pharmacologic pain management, reiki

JPSM Vol. 53 No. 2 February 2017 abstract (S797)
Identify opportunities for optimization of the pharmacists role in HPM
Programs Reporting Pharmacists on PC Team (2016)

Data courtesy of National Palliative Care Registry™ survey.

Hospital Beds:
- < 150: 15%
- 150-299: 14%
- 300-499: 7%
- 500+: 20%
Mission: SPCP promotes exceptional patient care by advancing pain and palliative pharmacists through education, development and research in collaboration with the transdisciplinary team.

Vision:

- Patient Care- SPCP strives for excellence in patient care by: optimizing pharmacotherapeutic outcomes, promoting best practices in pain and palliative care, and supporting quality of life
- Collaboration- support patient-centered transdisciplinary pain and palliative care teams with the pharmacist as an integral member of the team
- Education and Mentorship- provide education and training for the professional development an advancement of pain and palliative care pharmacists and other healthcare professionals
- Leadership- develop future pharmacist clinicians and leaders in pain and palliative care
- Development- advocate for legislation of public policy impacting pain and palliative care pharmacists and advocate for access to care for the pain and palliative care patient population
- Research- facilitate research and dissemination of information that promotes the impact of precision pharmacopalliation and the pharmacists as an essential part of the transdisciplinary team
SPCP Advocacy and Development Activities

- Develop Hospice and Palliative Care Pharmacist job descriptions to be posted on the Center to Advance Palliative Care (CAPC) website
- Survey membership to define and identify roles and responsibilities
- Survey of Schools of Pharmacy on Pain and Palliative Care in the curriculum (didactic and experiential exposure)
- Support provider status/reimbursement for pharmacist cognitive services
  - #RebrandPharmacy
- Advocate for BPS specialty in pain/palliative care
- Contribute to advocacy as a member of the National Coalition for Hospice and Palliative Care as well as a society and encourage members to participate in advocacy activities with local and national government agencies
National Coalition for Hospice and Palliative Care (NCHPC) releases National Consensus Project (NCP) Clinical Practice Guidelines for Quality Palliative Care, 4th edition

- Collaboration with NCHPC and NCP has led to the inclusion of pharmacists as an identified member of the team
  - “Clinical Pharmacists optimize medication management through a thorough review of the patient’s medications to identify therapies to further palliate symptoms, resolve or prevent potential drug-related toxicities, and recommend dose adjustments and deprescribing where appropriate”

- Additional inclusions and contributions include:
  - Addition of screening tools for substance abuse disorder
  - ASHP position statement
  - Inclusion of pharmacists in the definitions of specialty and primary palliative care
  - Several practice examples
SPCP Education and Research

- Host journal clubs and clinical topic discussions for members lead by residents and/or experts
- Partner with like organizations to provide SPCP sponsored educational programming
  - AAHPM, HOPA, ASCP, CPNP, CAPC
- Virtual Conference (½ day)
- Annual Literature Award
- Encourage scholarship among membership
- Support and highlight residency research projects
Final Thoughts

- Pharmacy education and practice in the US has evolved to include direct patient care activities ranging from patient counseling and education to direct provision of care through collaborative practice agreements.

- As the field of hospice and palliative care has grown so has the roles and responsibilities of pharmacists who practice in this area.

- I look forward to learning more about the practice of pharmacy, specifically in the hospice and palliative care setting in the UK.

- Special thanks to Andrew Dickman and ASPCP for inviting me to speak today and organizing my visit.