

TREATMENTTRENDS®: US NEPHROLOGY (BMM & ANEMIA)

This quarterly report series covers the management of dialysis and mid-late stage CKD patients from the perspective of nephrologists. Emphasis is on anemia management (ESAs and IV Iron), calcium-phosphorus metabolism (phosphate binders) and secondary hyperparathyroidism (vitamin D and calcimimetic agents). TreatmentTrends® are syndicated report series that provide longitudinal information on market dynamics. They provide insight into practice patterns, attitudes and perceptions, and current and projected use of various products. They evaluate perceived product advantages and disadvantages, as well as sales and messaging efforts of key market players

SAMPLE FRAME AND METHODOLOGY

45 minute online quantitative survey with several open-ended questions for qualitative feedback

200 nephrologists complete the survey in Q1, Q2, and Q3 (100 complete the bone and mineral section and 100 complete the renal anemia section)

300 nephrologists in the Q4 sample

Nephrologist Screening Criteria:

- In practice between 2 and 30 years
- Minimum of 50 dialysis or 100 CKD-ND (Stage 3 and 4) patients under management

PRODUCT COVERAGE

Approved: Epogen, Aranesp, Procrit, Omontys, Venofer, Ferrlecit, Nulecit, Ferraheme, INFeD, Dexterrum, Sensipar, Zemplar, Hectorol, Calcijex, Renagel, Renvela, PhosLo, Phoslyra, Fosrenol

In Development: Bardoxolone, Zerenex, HIF inhibitors, Soluble Ferric Pyrophosphate

RELATED 2012 REPORTS

- TreatmentTrends®: Chronic Kidney Disease
- TreatmentTrends®: Diabetic Nephropathy
- TreatmentTrends®: Bone and Mineral (EU)
- TreatmentTrends®: Renal Anemia (EU)
- ChartTrends® Bone and Mineral in Dialysis
- ChartTrends®: Bone and Mineral in CKD-ND
- ChartTrends®: Renal Anemia in Dialysis
- ChartTrends®: Renal Anemia in CKD-ND

PROJECT OBJECTIVES

- Understand nephrology patient load and practice demographics
- Assess current and expected treatment prevalence for renal anemia and bone and mineral metabolism agents among dialysis and later stage CKD patients, as well as brand utilization within each drug class
- Understand the most important product attributes by product class and the key advantages and disadvantages associated with each product
- Assess the variance in attitudes among nephrologists with regard to different treatment approaches and disease awareness issues such as beliefs about ESA safety, calcium load, complications of SHPT, and hyperphosphatemia
- Compare sales and messaging efforts of companies with products in the renal anemia and bone and mineral metabolism space
- Assess awareness of and interest in renal products in development (Zerenex, Bardoxolone, HIF-PH Inhibitors, Soluble Ferric Pyrophosphate, etc.)

DELIVERABLES

- Final report in Powerpoint format
- Complete set of frequency tables, summary statistics and cross-tabulations
- Proprietary slide deck and frequency tables
 - Clients purchasing prior to fielding will have the opportunity to include up to three proprietary questions in each wave
 - Responses to proprietary questions will be provided only to those sponsors and will not be included in the syndicated version of the report but provided under separate cover

REPORT DATES

Wave	Date comments/proprietary questions are due	Field date	Publication date
1	February 14, 2012	February 24, 2012	March 31, 2012
2	May 11, 2012	May 26, 2012	June 30, 2012
3	August 12, 2012	August 26, 2012	September 30, 2012
4	November 7, 2012	November 18, 2012	December 30, 2012

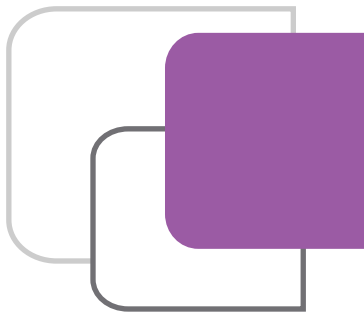


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 - Market News
 - Secondary Data (e.g., USRDS, NHANES, etc.)
 - Recent Conferences Overview (e.g., RPA, NKF, etc.)
 - Practice Demographics (e.g., practice type and dialysis affiliations)
 - Allocation of Professional Time
 - Organizational Membership
 - CKD-ND and Dialysis Patient Load
 - Transitioning to Dialysis
 - Transplant Eligibility
 - Hospitalizations
 - Need for New Therapies
 - Key New Therapies in Development—What is the in the Nephrology Clinical Pipeline?
 - Perceived Value of Products in Development
 - Products in Development: Bardoxolone
 - Familiarity
 - Source of Familiarity (e.g., Journals, Medical Meetings, etc.)
 - Interest after reviewing product profile
 - Source of Share (e.g., Diabetics vs. Non-diabetics)
 - Bundling
 - General Impressions
 - Impact on CKD and Dialysis Patient Outcomes
 - Impact on Dialysis Patient Management and Decision Making Power
 - Pressure from Dialysis Unit
 - Bundling Impact on ESA and Iron Usage To Date and in the Future
 - Impact of the Quality Incentive Program (QIP)
- **Renal Anemia Market**..... 50
 - Recent Changes In Anemia Management & Year over Year Comparisons
 - Blood Transfusions Changes—What Hemoglobin triggers a blood transfusion?
 - Safety Ratings: ESAs and IV Iron
 - Use of ESAs Over Time
 - Awareness and Impact of ESA Label Change
 - What is the greatest impact on ESA Use?
 - Protocols for Use of ESAs—Have they changed?
 - Hemoglobin Initiation and Hold Over Time
 - Hemoglobin Testing Frequency
 - ESA HD Dosing Frequency—Over Time, by Brand, by Method of Administration (e.g., IV vs. SubQ)
 - ESA Administration in CKD-ND
 - ESA Stocking in Nephrology Offices
 - ESA Market Share in CKD-ND and Dialysis
 - ESA Contact Rates & Primary Message Received
 - ESA Importance vs. Performance
 - Safety Concerns with ESAs

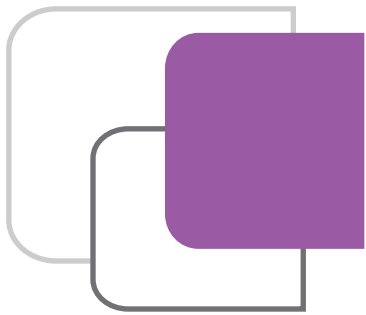


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Renal Anemia Market (continued)

- ESA Statement Agreements with shifts over time
- Desirable characteristics in New Anemia Products in Development
- Preferred ESA Maintenance Dosing Schedule
- Unaided Awareness of New Products in Development
 - HIF-PH Inhibitors

•IV Iron Market 86

- Use of Oral Iron Over Time by Patient Population
- Use of IV Iron Over Time by Patient Population
- Unaided Awareness of New Products in Development
- Familiarity/Comfort of Nulecit
- IV Iron Stocking in Nephrology Offices
- Reasons for Not Stocking
- IV Iron Administration in CKD-ND
- IV Iron Market Share in HD and PD
- IV Iron Market Share in by Dialysis Chain
- Formulary Product in Primary Dialysis Center
- IV Iron Changes in the Past Year
- TSAT and Ferritin Levels for IV Iron Hold in Dialysis
- Breadth and Depth of Feraheme Use in CKD-ND
- Market Share IV Iron Preparations: CKD-ND
- IV Iron Contact Rates & Primary Message Received
- IV Iron Importance vs. Performance
- IV Iron Statement Agreements with shifts over time
- Perceptions of IV Iron Safety
- Familiarity and Interest with Soluble Ferric Pyrophosphate (SFP)

•Phosphate Binder Market 114

- What is the most important level to keep within normal range?
 - How does that differ between CKD-ND and Dialysis?
- Use of Phosphate Binders Over Time
- Beliefs About Hyperphosphatemia
- Initiation of a Phosphate Binder in CKD-ND and Dialysis
- Calcium Level at which Patient is Considered Hypercalcemic
- Use of Combination Therapy Over Time
- HD Market Share Over Time
- Current HD Share by Chain
- CKD-ND Market Share Over Time
- Use of Renvela Formulations
- Awareness, Initial Use and Perceptions of Phoslyra
- Use of Calcium Acetate Formulations
- Phosphate Binder Formulation Preference
- Preferred First Line Agents: CKD-ND and Dialysis
- Phosphate Binder Contact Rates & Primary Message Received
- Phosphate Binder Importance vs. Performance
- Phosphate Binder Overall Satisfaction
- Phosphate Binder Statement Agreements with shifts over time

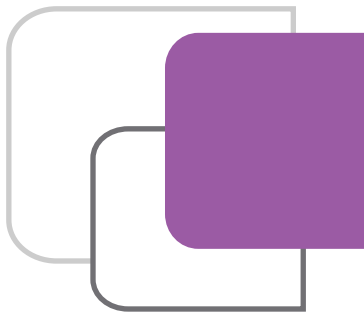


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▪ **Phosphate Binder Market (continued)**

- Views on Calcium Load and Calcification
- Desirable Attributes in a New Phosphate Binder
- Products in Development: Zerenex (Keryx)
 - Familiarity
 - Interest after revision product profile
 - Source of Share

▪ **Secondary Hyperparathyroidism Market 147**

- **Nutritional Vitamin D (NVD)**
 - Use of NVD Over Time
 - Measurement of 25D Levels: CKD-ND and Dialysis
- **Active Vitamin D (AVD)**
 - Need for AVD: CKD-ND and Dialysis
 - Frequency of PTH Measurement in HD Patients
 - PTH Targets for Dialysis Patients
 - AVD Market Share: HD & PD
 - AVD Market Share by Dialysis Chain
 - AVD Formulation (IV vs. Oral)
 - Administration of Oral AVD to HD patients
 - AVD Market Share in CKD-ND
 - Preferred First Line AVD Agent in CKD-ND
 - AVD Most Recent Contact & Primary Message Received
 - PTH Modifiers Importance vs. Performance
- **Calcimimetic Agents (Sensipar)**
 - Use of Sensipar Over Time
 - Use of Sensipar if Not Limited by Cost / Reimbursement
 - PTH at Sensipar Initiation
 - Reasons for Use of Sensipar
 - Barriers to Increased Sensipar Use
 - Sensipar Statement Agreements

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